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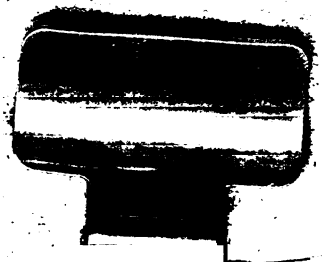
No. 102

THIRD ANNUAL REPORT
OF THE
MINIMUM WAGE COMMISSION
OF
MASSACHUSETTS.

FOR THE YEAR ENDING DECEMBER 31, 1915.



BOSTON:
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,
32 DERNE STREET.
1916.



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APPROVED BY
THE STATE BOARD OF PUBLICATION.

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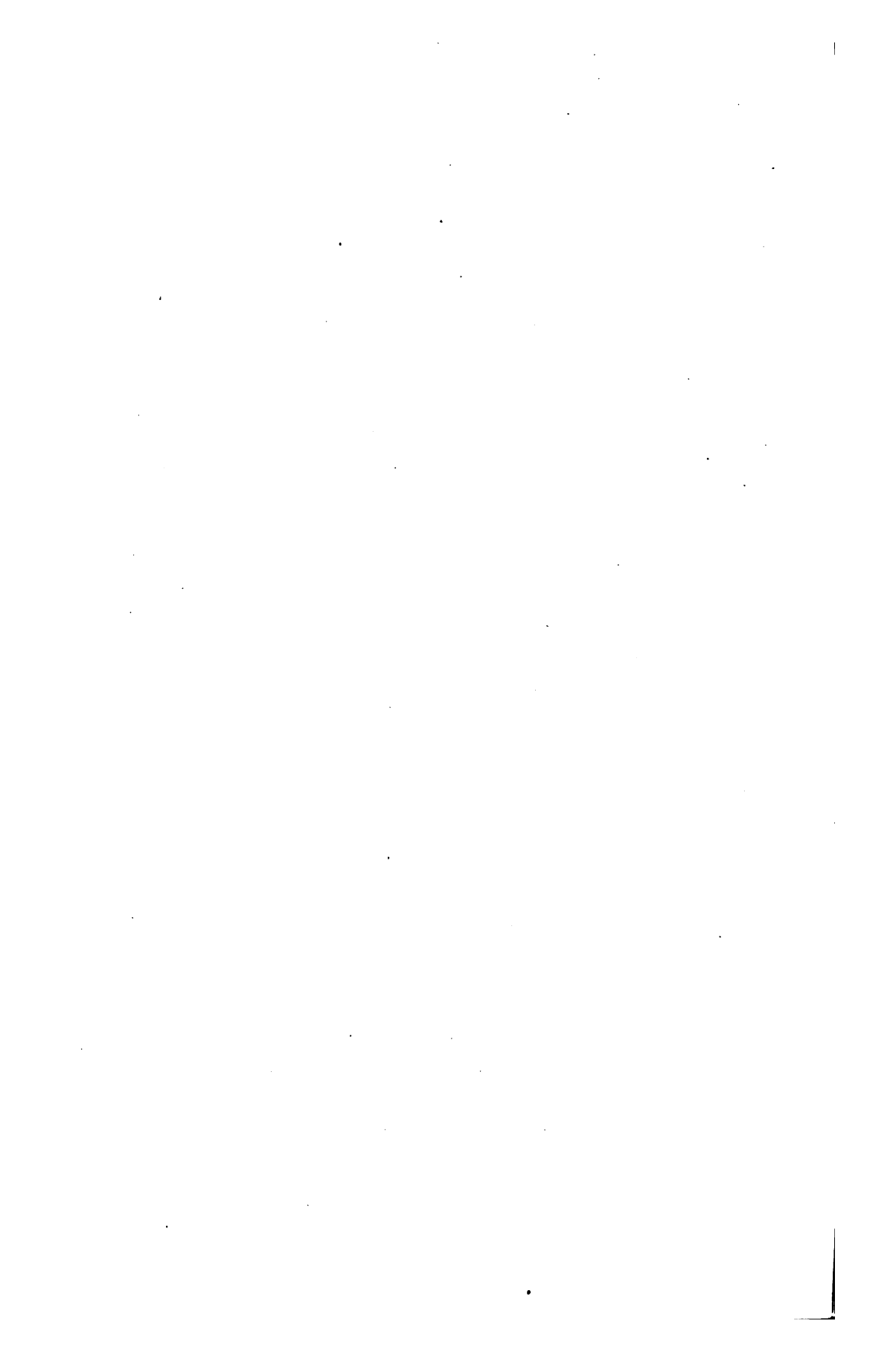
MEMBERS OF THE COMMISSION.

— —, *Chairman.*

MABEL GILLESPIE.

ARTHUR N. HOLCOMBE.

ELLEN NATHALIE MATTHEWS, *Secretary.*



The Commonwealth of Massachusetts.

REPORT.

To the Honorable the Senate and the House of Representatives in General Court assembled.

The Massachusetts Minimum Wage Commission herewith respectfully submits the following report, covering the year ending Dec. 31, 1915. To it is appended the report of the secretary, showing in detail the results of the operation of the minimum wage in the brush industry and of the Commission's investigations into the wages of women in the paper-box and women's clothing factories and in the hosiery and knitting mills of the Commonwealth, together with other information regarding the work of the Commission. Copies of the minimum wage law, as amended, and of the decrees entered by the Commission and in force on Jan. 1, 1916, are also appended.

CHANGE IN THE PERSONNEL OF THE COMMISSION.

On Sept. 30, 1915, the term of the Rev. Robert E. Bisbee of South Middleborough, chairman of the Commission since November, 1914, expired. Mr. Bisbee declined a reappointment, and the resulting vacancy in the Commission has not yet been filled. In September, also, the Commission, to its great regret, lost the services of its first secretary, Miss Amy Hewes, who resumed her duties as professor of economics and sociology at Mount Holyoke College. The vacancy was filled by the appointment of Miss Ellen Nathalie Matthews.

WOMEN'S WAGES IN MASSACHUSETTS.

The first duty of the Minimum Wage Commission is to inquire into the wages paid to the female employees in any

occupation in the Commonwealth, if the Commission has reason to believe that the wages paid to a substantial number of such employees are inadequate to supply the necessary cost of living and to maintain the worker in health.¹ The report of the original Commission on Minimum Wage Boards,² recommending the enactment of a minimum wage law, gave the present Commission reason to believe that the wages paid to a substantial number of female employees in at least three occupations — employment in the manufacture of confectionery, in laundries and in retail stores — were inadequate for the purposes indicated in the law. Various Federal and State reports on the wages of women, cited by the Commission on Minimum Wage Boards, indicated that there were probably many more such occupations in Massachusetts.

The annual reports of the Massachusetts Bureau of Statistics on the Statistics of Manufactures are believed by the Commission to be the most up-to-date and reliable sources of general information concerning the wages of women in Massachusetts industries. These reports are based upon information voluntarily supplied by the employers, and so far as they go may be expected to show the facts concerning the wages of women in no more unfavorable light than is necessary. Acting upon the evidence contained in the original report of the Commission on Minimum Wage Boards, and in subsequent reports of the Bureau of Statistics, the present Commission from its organization in 1913 to the close of 1915 has inquired into the wages of women in nine occupations, as follows: in 1913 (July to December), the manufacture of brushes and corsets; in 1914, confectionery, laundries and retail stores; and in 1915, paper boxes, women's clothing, hosiery and knit goods, and men's clothing. The principal facts which gave the Commission reason to believe that wages were too low in these occupations are summarized in the following table: —

¹ Section 3 of chapter 706, Acts of 1912, as amended.

² House Document No. 1697, 1912.

| INDUSTRY. ¹ | Number of Establishments. | AVERAGE NUMBER OF EMPLOYEES. | | PER CENT. OF FEMALES EARNING ² — | |
|-----------------------------------|---------------------------|------------------------------|----------|---|------------|
| | | Males. | Females. | Under \$6. | Under \$8. |
| Brushes, | 27 | 771 | 795 | 25.4 | 66.6 |
| Corsets, | 11 | 326 | 2,651 | 21.9 | 49.9 |
| Confectionery, | 121 | 1,882 | 5,343 | 31.5 | 71.2 |
| Laundries, ³ | 377 | 2,831 | 5,329 | 14.4 | 59.7 |
| Boxes, fancy and paper, | 95 | 1,488 | 2,807 | 18.4 | 47.7 |
| Clothing, women's, | 184 | 1,425 | 4,627 | 13.6 | 39.6 |
| Hosiery and knit goods, | 65 | 2,932 | 7,807 | 16.7 | 46.5 |
| Clothing, men's, | 206 | 2,634 | 3,179 | 13.5 | 42.8 |

Figures for women employed in retail stores are not furnished by the Massachusetts Bureau of Statistics. According to the thirteenth United States Census, 21,434 women were employed in 1909 as saleswomen and clerks in stores in Massachusetts.⁴ This figure is probably somewhat less than the total number of women employed in retail establishments.⁵ The Commission's belief that the wages of women in these occupations were too low was confirmed by its own more detailed investigations. The results of these investigations have been published separately by the Commission. They are reprinted in the reports of the secretary, appended to the Commission's annual report, with the exception of that on men's clothing, which will appear shortly.

MINIMUM WAGE BOARDS IN MASSACHUSETTS.

The second duty of the Commission is defined in the law as follows:—

If after such investigation the Commission is of the opinion that in the occupation in question the wages paid to a substantial number of female employees are inadequate to supply the necessary cost of living and to maintain the worker in health, the commission shall establish

¹ The information relating to all occupations, except laundries, is taken from the annual report of the Bureau of Statistics on the Statistics of Manufactures for the year 1913, pp. 2-11 and pp. 84-123.

² This includes only females eighteen years of age or over for the week of employment of the greatest number, and shows their rates of payment. This showing is therefore much more favorable than would be the actual average weekly earnings of all females, or the same females for the whole year.

³ Massachusetts Bureau of Statistics report on Power Laundries, 1913, pp. 17, 18, 22.

⁴ United States thirteenth census, Vol. IV., p. 474.

⁵ Minimum Wage Commission, Bulletin No. 6, Wages of Women in Retail Stores, p. 6.

a wage board consisting of an equal number of representatives of employers in the occupation in question, and of persons to represent the female employees in said occupation, and of one or more disinterested persons appointed by the commission to represent the public.¹

It became the Commission's duty, therefore, to establish a wage board in each of the above occupations, when the completion of its own investigation confirmed the belief founded on such evidence as had previously been available. In 1913 the brush makers' wage board was established, consisting of six representatives of the employers, an equal number of persons representing the employees, and three disinterested persons to represent the public. The chairman of the board was Mr. Robert G. Valentine. In 1914 wage boards were established in the confectionery and laundry industries under the chairmanship of Mr. William C. Ewing and Judge Edward L. Logan, respectively. In 1915 wage boards were established in the retail store, corset and paper-box industries under the chairmanship of Prof. Carroll W. Doten, Judge William C. Forbes and Mr. Frank H. Pope, respectively. A wage board in the women's clothing industry is now being established. All these boards were established upon the model of the brush makers' wage board, with the exception of the laundry wage board, which included only one representative of the public, the chairman, and of the corset wage board, which also included only one representative of the public and differed further from the brush board by having on it only three representatives of the employers and employees, respectively.

THE WORK OF THE WAGE BOARDS.

The wage boards are directed by law to take into consideration (1) the needs of the employees and (2) the financial condition of the occupation and the probable effect thereon of any increase in the minimum wages paid, and to endeavor to determine the minimum wage suitable for a female employee of ordinary ability in the occupation in question, and also suitable minimum wages for learners and apprentices and for minors below the age of eighteen years.

¹ Section 4 of chapter 706, Acts of 1912, as amended.

When a majority of the members of a wage board agree upon minimum wage determinations, they are to report such determinations to the Commission, together with the reasons therefor and the facts relating thereto.¹ Only four wage boards had completed their work and reported to the Commission by the close of 1915, namely, the brush, confectionery, laundry and retail store boards.

Cost of Living.

All four boards reached similar conclusions with respect to the needs of the employees. The brush makers' board tentatively estimated that a normal self-supporting woman of ordinary ability employed in a Massachusetts brush factory would need at least \$8.71 a week to supply the cost of living and maintenance in health. Allowing for variations between individuals, this board finally concluded that "the sum required to keep alive and in health a completely self-supporting woman in Boston is in no case less than \$8, and in many cases may rise to \$9 or more."² The candy board estimated the required sum at \$8.75 a week; the laundry board at \$8.77. The retail store board reported that it had not seemed necessary to determine in exact terms and in detail the necessary cost of living, but that it considered the necessary cost of living to be at least as much as and probably somewhat more than \$8.50 a week. In each of these occupations, therefore, considerable increases in the minimum wages paid were necessary in order that they might be adequate for the purposes indicated in the minimum wage law.

Financial Conditions of Occupations.

The boards reached different conclusions with respect to the financial conditions of the occupations and the probable effect thereon of any increase in the minimum wages paid.

The brush board reported (June, 1914) that it believed the brush industry to be "not in condition to pay as high a minimum wage or to bring it as near the actual cost of living as many other industries in the State." The candy

¹ Section 5 of chapter 706, Acts of 1912, as amended.

² Bulletin No. 3 of the Minimum Wage Commission, entitled *Statement and Decree concerning the Wages of Women in the Brush Industry in Massachusetts*, Appendix No. 1.

board reported (February, 1915) that that industry could afford to pay a minimum wage to experienced workers sufficient to cover the estimated cost of living. The laundry board reported (May, 1915) that in consideration of the financial condition of the industry during the then existing industrial depression, it would recommend for the present a minimum weekly wage of 77 cents less than the estimated cost of living.

The retail store board reported (August, 1915) that "the schedule of wages adopted is as high as the retail stores of the State will be able to pay until industrial and business conditions shall have shown a marked improvement. . . . When this adjustment to the higher wage scale has been accomplished, however, and when the business is in a more prosperous condition, the rates herein may and perhaps ought to be advanced to a somewhat higher level."

Determinations of Minimum Wage Boards.

Having duly considered the needs of the employees, the financial condition of the occupations, and the probable effect thereon of any increases in the minimum wages paid, the wage boards agreed upon determinations and reported to the Commission in accordance with the law. The brush board recommended a minimum wage for experienced workers of 15½ cents an hour. The candy board recommended \$8.75 a week; the laundry board, \$8 a week; the retail store board, \$8.50 a week. Lower rates were recommended for inexperienced workers. These recommendations were concurred in by all the representatives of the public and of the employees on each board, and also, in the case of the retail store board, by all but one of the representatives of the employers. The reports of the several boards showing the reasons for their determinations and the facts relating thereto mark a new stage in the relations between capital and labor in this Commonwealth. The introduction of the legal minimum wage, as has been well said, opens up a new province for law and order.¹

¹ Justice Henry B. Higgins of the Australian High Court of Justice, in the *Harvard Law Review*, November, 1915.

REVIEW OF DETERMINATIONS BY THE COMMISSION.

The third duty of the Commission is to review the reports received from wage boards, and, if it approves any of the determinations recommended by a wage board, to give a public hearing to all employers paying wages less than those recommended. If, after such public hearing, the Commission finally approves the determinations of the board, it is required to enter a decree of its findings and note thereon the names of employers, so far as known, who fail or refuse to accept the recommended minimum wage and to agree to abide by it.¹ The Commission accordingly gave public hearings to the employers in the brush, confectionery, laundry and retail store industries. At the laundry hearing (June, 1915) no employers appeared. At the brush and retail store hearings (June, 1914, and August, 1915, respectively) comparatively few employers were present or were represented by counsel, but no testimony or evidence was produced tending to show that the determinations of the wage boards in question were unreasonable. At the confectionery hearings (February and March, 1915) the principal employers were present or were represented by counsel, and much testimony with other evidence was produced which was alleged to show that the determinations of the board were arbitrary and oppressive to employers. The Commission, after careful consideration of the facts and arguments presented at the hearing, was unable to perceive that the determinations of the board had been shown to be unreasonable.

The Commission, therefore, believing the reasons reported by the several wage boards in support of their determinations to be adequate, finally approved the determinations recommended by them. Copies of the decrees entered by the Commission in consequence of its final approval of the determinations of the brush, laundry and retail store wage boards are printed in the Appendix. The brush decree became effective on Aug. 15, 1914, the laundry decree on Sept. 1, 1915, and the retail store decree on Jan. 1, 1916. The confectionery decree was intended to become effective on Oct. 1,

¹ Section 6 of chapter 706, Acts of 1912, as amended.

1915. In June, however, the Commission was advised by the Attorney-General that a technical defect in the original organization of the candy makers' wage board had probably rendered its determinations invalid. The Commission therefore resolved to reorganize the board. The employers, however, after duly nominating their representatives to the new board, applied to the courts for an injunction to restrain the Commission from further proceedings in the matter. The Commission has refrained from further proceedings, though the injunction has not yet been granted to the employers.

THE ENFORCEMENT OF MINIMUM WAGE DETERMINATIONS.

The fourth duty of the Commission is to publish at such times and in such manner as it may deem advisable a summary of its findings and of its recommendations and the facts as to the acceptance of its recommendations by employers. It may also publish the names of employers whom it finds to be following or refusing to follow its recommendations.¹ The Commission is further required to determine from time to time whether employers in the occupations for which minimum wage determinations have been approved are obeying its decrees, and at its discretion to publish the name of any employer found to be violating a decree.² At the time of entering its decrees relating to the wages of women in brush factories, laundries and retail stores, the Commission published summaries of its findings and recommendations in the form of special bulletins or statements, which were widely copied in whole or in part in the newspapers of the Commonwealth.

Brush Industry.

In the case of the brush industry two subsequent investigations have been made to determine whether employers were paying not less than the recommended minimum wages. At the first investigation (November and December, 1914) five employers were found to be paying less than the recommended minimum wages to a total of eighteen female employees. Thereafter (February, 1915) the Commission

¹ Section 6 of chapter 706, Acts of 1912, as amended.

² Section 14 of chapter 706, Acts of 1912, as amended.

caused to be published in the "Boston Advertiser" the names of all employers who had accepted its recommendations relating to wages in brush factories and who were known to be paying not less than the recommended minimum wages. At the second investigation (June and July, 1915) three employers were found to be paying less than the recommended minimum wages to a total of five female employees. This almost complete compliance is perhaps as much as should be expected under the present law. It is notable that such a high degree of compliance with the decree relating to wages in brush factories was secured without publishing the names of employers other than those who accepted the decree and were following it. The Commission deems it unnecessary to publish the names of other employers at the present time.

Laundries.

In the case of the laundries, the Commission at the time of entering its decree not only gave out to the newspapers and general public a summary of its findings and recommendations, but also prepared special notices to be posted in the laundries for the further information of female employees. Authority to cause notices to be posted in that manner was conferred upon the Commission by a law enacted by the last Legislature at the request of the Commission.¹ These notices were not so generally posted by employers as might have been expected. Laundry employers, indeed, have been less generally disposed to accept the Commission's recommendations than the brush employers were. In November, 1915 (after the laundry decree had been effective for a period long enough to enable employers to make all appropriate changes in their wage schedules), the Commission proceeded to the investigation necessary to determine the degree of compliance with its decree. The employers generally declined, however, to permit its agents to examine their records so far as related to the wages paid to female employees, though the duty to permit such an examination is expressly imposed upon them by law.² The Commission has

¹ Chapter 65, General Acts of 1915.

² Section 11 of chapter 706, Acts of 1912, as amended.

consequently been compelled to make a more vigorous use of its powers to enforce its decrees than was necessary in the brush industry. A number of employers have been subpoenaed to appear before the Commission with such parts of their books and records as relate to the wages paid to female employees, and the Commission will use all the powers conferred upon it by law to secure compliance with this decree.

Retail Stores.

In the case of the retail stores the Commission at the time of entering its decree published a summary of its findings and recommendations in the same manner as in the case of the laundries. As might be expected from the fact that the determinations of the retail store wage board were approved by all but one of the employers' representatives on the board, the Commission's recommendations relating to the wages of women in retail stores have been much more generally accepted by the principal employers than the recommendations relating to wages in laundries. Directly after the retail store decree became effective (Jan. 1, 1916), the Commission published the facts as to the acceptance thereof by employers, beginning with those in the county of Suffolk.

EFFECT OF THE MINIMUM WAGE IN THE BRUSH INDUSTRY.

The wages recommended for women employed in brush factories became effective under circumstances which put the theory of the minimum wage to the severest test. In June, 1914, when the brush makers' wage board made its final report to the Commission, the brush industry was somewhat depressed, but not much more so than at any time during the last two or three years. In August, when the wages recommended by the Board were to become effective, the European war had broken out. The supply of bristles, the most important raw material of brushes, was interrupted, and the production of brushes seriously curtailed. When the supply of bristles had been restored, the general business depression injuriously affected the demand for brushes, and the period of curtailed production and consequent restricted employment was prolonged. The brush business revived in the

spring of 1915, with the general revival of industry in the United States, and by June had regained its normal condition. Meanwhile, however, false and misleading reports were being circulated concerning the alleged injurious effects of the minimum wage upon the brush industry. In June, therefore, the Commission caused an investigation to be made to determine what effects had really been produced by the minimum wage.

This investigation consisted of an examination of the voluntary statements of the employers to the Massachusetts Bureau of Statistics for publication in the official *Statistics of Manufactures*, and of the pay rolls of the nineteen brush factories which were employing women both in 1913, when the Commission first investigated the brush industry, and in 1915, when business conditions were again approaching the normal. The results of the investigation were published as a special bulletin,¹ a copy of which is appended to this report.

The results may be briefly summarized as follows: (1) the establishment of the minimum wage in the brush industry has been followed by a remarkable increase in the earnings of women employed in that industry; (2) the employment of women at ruinously low rates has been practically stopped; (3) the proportion of women employed at more than the prescribed minimum rate has more than doubled; and (4) all this has been accomplished without putting an unreasonable financial burden upon the industry.

During the last two years the total number of brush establishments in Massachusetts has increased, the total capital invested has increased, the total value of material used has increased, and the total value of product has increased. Though the industry was temporarily hard hit by the war, so were many other industries of the Commonwealth in which the minimum wage has not been established. In short, the evidence shows that the establishment of the minimum wage has been followed by the desired results, both in the industry as a whole and in every individual establishment where the management has been willing to give it a fair trial.

¹ Bulletin No. 7, September, 1915, *The Effect of the Minimum Wage Decree on the Brush Industry in Massachusetts*.

EFFECTS OF THE MINIMUM WAGE IN OTHER OCCUPATIONS.

It is too soon to determine the effects of the minimum wage in the other occupations to which it has been applied. The Commission, however, expects the results to be more rather than less favorable in the laundries and retail stores. Financial conditions in those occupations are better than in the brush industry, and the condition of business in general is better than it was a year ago. There is no more favorable season than one of advancing prosperity for establishing the principle that women who work for a living shall, so far as is humanly possible, make a living by their work. The Massachusetts minimum wage law merely requires that employers of women at least consider whether they cannot pay their female employees enough to supply the cost of living and maintenance in health. It does not compel them to pay any particular amount. The Commission can only recommend that employers accept the determinations of the wage boards. In fact, no one of the three determinations now in force fixes the minimum wage at the level estimated by the wage boards to be necessary to supply the cost of living and maintenance in health. In each case allowances were made for exceptional financial conditions. Moreover, the Commission's recommendations relate only to rates of wages. In so far as low earnings are the result of irregular employment, rather than low rates of wages, the situation is one calling for a different remedy than the minimum wage. Under these circumstances it is strange that some employers refuse even to consider whether a living wage can be paid to their female employees. The Commission does not believe that such a refusal represents the sober second thought of employers generally, nor does it believe that under existing conditions such a refusal would be tolerated for long by public opinion in this Commonwealth.

RECOMMENDED LEGISLATION.

The experience of the year has made it evident that additional legislation is necessary in order to facilitate the performance of the duties of the Commission as prescribed

in the present law. Every employer of women and minors is now required to keep a register of the names, addresses and occupations of all women and minors employed by him, together with a record of the amount paid each week to each woman and minor.¹ In order, however, that a wage board may have all pertinent information relative to the wages paid in any occupation, it is important that the employers should also keep a record of the number of hours each week for which women and minors in their employ are paid. Without this information it is difficult in many cases to know whether low earnings are the result of unreasonably low rates of wages or of irregular employment at rates in themselves not unreasonably low. If earnings were solely the result of irregular employment, the action which should be taken by a wage board would be different from that necessary if low earnings resulted from the payment of unreasonably low rates. The Commission therefore recommends the following legislation requiring certain employers to keep records of hours worked by women and minors in their employ: —

AN ACT TO PROVIDE FOR RECORDS OF HOURS OF EMPLOYMENT OF
WOMEN AND MINORS.

Be it enacted, etc., as follows:

SECTION 1. Section eleven of chapter seven hundred and six of the acts of the year nineteen hundred and twelve, as amended by chapters three hundred and thirty and six hundred and seventy-three of the acts of the year nineteen hundred and thirteen and chapter three hundred and sixty-eight of the acts of the year nineteen hundred and fourteen, is hereby further amended by inserting after the word "minor", in the fourth line, the words: — and a record of the hours worked by each of such employees each week: *provided*, that such record of hours shall not be required in the case of women and minors who are paid a fixed weekly wage or rate, without deduction for hours of unemployment, — so as to read as follows: — *Section 11.* Every employer of women and minors shall keep a register of the names, addresses and occupations of all women and minors employed by him, together with a record of the amount paid each week to each woman and minor, and a record of the hours worked by each of such employees each week: *provided*, that such record of hours shall not be required in the case of women and minors who are paid a fixed weekly wage or

¹ Section 11 of chapter 706, Acts of 1912, as amended.

rate, without deduction for hours of unemployment, and shall, on request of the commission or of the director of the bureau of statistics, permit the commission or any of its members or agents, or the director of the bureau of statistics or any duly accredited agent of said bureau, to inspect the said register and to examine such parts of the books and records of employers as relate to the wages paid to women and minors. The commission shall also have power to subpoena witnesses, administer oaths and take testimony. Such witnesses shall be summoned in the same manner and be paid from the treasury of the commonwealth the same fees as witnesses before the superior court.

SECTION 2. This act shall take effect upon its passage.

The Commission has been advised that the meaning of the existing law with respect to the Commission's power to appoint and remove members of wage boards is uncertain, and should be further defined by appropriate legislation. In the case of the corset wage board, the Commission accepted the resignation of one of the representatives of the employees. It was then advised by the Attorney-General that it had no power to fill the resulting vacancy. It was further advised by the chairman of the board, Judge Forbes, that any determinations which the board might reach would probably be invalid unless the vacancy were filled. In order to prevent the recurrence of such a dilemma the Commission recommends the following legislation empowering the Commission to fill vacancies arising in wage boards:—

AN ACT TO PROVIDE FOR FILLING VACANCIES ON WAGE BOARDS.

Be it enacted, etc., as follows:

SECTION 1. Section four of chapter seven hundred and six of the acts of the year nineteen hundred and twelve, as amended by chapters three hundred and thirty and six hundred and seventy-three of the acts of the year nineteen hundred and thirteen and chapter three hundred and sixty-eight of the acts of the year nineteen hundred and fourteen, is hereby further amended by adding thereto the following:—The commission shall have power to fill a vacancy or vacancies arising in a duly constituted wage board by appointing a sufficient number of suitable persons to complete the representation of the employers, employees, or public, as the case may be,—so as to read as follows:—*Section 4.* If after such investigation the commission is of the opinion that in the occupation in question the wages paid to a substantial number of female employees are inadequate to supply the necessary cost of living and to maintain the worker in health, the commission shall establish a

wage board consisting of an equal number of representatives of employers in the occupation in question, and of persons to represent the female employees in said occupation, and of one or more disinterested persons appointed by the commission to represent the public; but the representatives of the public shall not exceed one-half of the number of representatives of either of the other parties. The commission shall give notice to employers and employees in said occupation by publication or otherwise of its determination to establish a wage board, and shall request that said employers and employees, respectively, nominate representatives for said board by furnishing names to the commission. The representatives of employers and employees shall be selected by the commission from names furnished by the employers and by the employees, respectively: *provided*, that these names are furnished within ten days after the request of the commission. The commission shall designate as chairman one of the representatives of the public, and shall make rules and regulations governing the selection of members and the modes of procedure of the boards, and shall exercise exclusive jurisdiction over all questions arising with reference to the validity of the procedure and of the determination of the boards. The members of wage boards shall be compensated at the same rate as jurors, and they shall be allowed the necessary traveling and clerical expenses incurred in the performance of their duties, these payments to be made from the appropriation for the expenses of the commission. The commission shall have power to fill a vacancy or vacancies arising in a duly constituted wage board by appointing a sufficient number of suitable persons to complete the representation of the employers, employees, or public, as the case may be.

SECTION 2. This act shall take effect upon its passage.

The experience of the Commission shows that further powers of enforcement are necessary to insure proper publicity for its decrees. It therefore recommends the following legislation:—

AN ACT TO PROVIDE FOR THE POSTING OF INFORMATION IN PLACES OF EMPLOYMENT.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter sixty-five of the general acts of the year nineteen hundred and fifteen is hereby amended by adding thereto the following:— and the commission shall require employers to post and keep posted in conspicuous positions in their places of employment such bulletins as the commission may issue regarding the minimum rates of wages for female employees. Whoever violates the provisions of this act shall be deemed guilty of a misdemeanor and shall be punished by a fine of not less than ten and not more than fifty dollars for each offence. The minimum wage commission and the state

board of labor and industries shall have power to enforce the provisions of this act, — so as to read as follows:— *Section 1.* The minimum wage commission may require employers to post in conspicuous positions in their places of employment such notices as the said commission may issue for the information of employees, and the commission shall require employers to post and keep posted in conspicuous positions in their places of employment such bulletins as the commission may issue regarding the minimum rates of wages approved for female employees. Whoever violates the provisions of this act shall be deemed guilty of a misdemeanor and shall be punished by a fine of not less than ten and not more than fifty dollars for each offence. The minimum wage commission and the state board of labor and industries shall have power to enforce the provisions of this act.

SECTION 2. This act shall take effect upon its passage.

APPROPRIATION.

The appropriation for the fiscal year ending Nov. 30, 1915, was \$17,900. The manner in which this money has been employed is shown in the financial statement appended to the secretary's report. This sum was not enough to support the work planned by the Commission for the year 1915. The commissioners themselves served without pay for a considerable portion of the year, and, what was much more important, the work of the wage boards was seriously hampered. If the Commission is to make due progress in its work during the coming period of prosperity, it must either have a larger appropriation or require wage boards to perform their duties with inadequate information concerning the needs of employees, financial conditions in the occupations with which they are dealing, and probable effects thereon of any increases in the minimum wages paid. To the close of 1915 the Commission has investigated occupations containing more than 50,000 female employees; it has established wage boards to deal with occupations containing nearly 40,000 female employees, and it has approved determinations of wage boards applying to occupations containing more than 25,000 female employees. Now it asks for an appropriation for 1916 sufficient to enable it to investigate other occupations containing about 30,000 female employees, and to support the work of the wage boards already established or likely to be established within the next twelve months. The total num-

ber of women employed in the occupations covered by the report on the Statistics of Manufactures for 1913 published by the Bureau of Statistics was 189,743. This does not include girls under eighteen, nor establishments with less than \$5,000 value of product, nor laundries, retail stores, and several other important occupations in which women are employed. It is manifest that much work remains to be done before the people of this Commonwealth can feel that the State has fulfilled its duty to the women who toil in factories, shops and mills.

Respectfully submitted,

MABEL GILLESPIE,
ARTHUR N. HOLCOMBE,
Minimum Wage Commission.

REPORT OF THE SECRETARY.

To the Minimum Wage Commission.

I herewith submit the following report of the investigations into the effect of the minimum wage decree on the brush industry in Massachusetts, and into the wages of women in the paper-box, women's clothing and hosiery and knit goods factories of this Commonwealth, and a summary of the expenditure of the appropriation for 1915 granted by the General Court. Of the investigations herewith submitted all but the last were made under the direction of Miss Amy Hewes, former secretary of the Commission.

THE EFFECT OF THE MINIMUM WAGE DECREE ON THE BRUSH INDUSTRY IN MASSACHUSETTS.

In the months of July and August, 1913, the Minimum Wage Commission made a study of the wages paid to women employed in the brush industry in Massachusetts.¹ Acting on the information obtained, and as authorized by law,² the Commission formed a wage board to recommend minimum rates for the occupation in question.³ Upon receipt of the final report of the Brush Makers' Wage Board, and after public hearing held thereupon, the following decree was made by the Commission:⁴—

1. The lowest time wage paid to any experienced female employee in the brush industry shall be 15½ cents an hour.
2. The rate for learners and apprentices shall be 65 per cent. of the minimum, and the period of apprenticeship shall not be more than one year.
3. These findings shall apply also to all minors.
4. If in any case a piece rate yields less than the minimum time rate, persons employed under such rate shall be paid at least 15½ cents an hour.
5. This decree shall take effect on Aug. 15, 1914, and shall remain in effect until altered by the Commission.

¹ Bulletin No. 1, Minimum Wage Commission, January, 1914.

² Chapter 706, Acts of 1912, as amended.

³ Bulletin No. 3, Minimum Wage Commission, Aug. 15, 1914 (Statement and Decree concerning the Wages of Women in the Brush Industry in Massachusetts).

⁴ *Ibid.*, p. 15.

The rates prescribed have now been in force more than a year, and the effect of the increases on the brush industry is a matter which has been variously interpreted by manufacturers, by employees and by the public. The Commission has made two reinspections of the brush factories, — one in November and December, 1914, for the purpose of locating whatever instances of failure or refusal to follow the rulings might exist, and the second in June and July, 1915, for the purpose of ascertaining the effects of the rates upon the industry as well as to record violations. The Commission is therefore in a position to report the degree of compliance with the decree of Aug. 15, 1914, and the effect of the rates upon the industry, in so far as it has been able to determine that effect.

Nineteen of the 29 brush factories known to have been in operation in the State during the period covered since the original investigation have been regularly employing women at the time of one or more of the inspections. Concerning these 19 factories, the pay rolls of which have been inspected by the agents of the Commission, the following statements may be made with reference to the extent of compliance with the decree: —

At the time of the first inspection of factories after the decree went into effect non-compliance with the rates prescribed was found on the pay rolls of five firms, and 18 women employees of these firms were in receipt of less than the prescribed hourly amounts. Two firms failed to keep records adequate to show whether or not they complied. In compliance with section 6, chapter 706, Acts of 1912, as amended, the Commission therefore caused to be published in the "Boston Advertiser" for Feb. 12, 1915, the following notice: ¹ —

COMMONWEALTH OF MASSACHUSETTS.

MINIMUM WAGE COMMISSION.

Notice is hereby given that the following manufacturers of brushes employing women have accepted the decree issued by this Commission Aug. 15, 1914, and are known to be paying not less than 15½ cents per

¹ Establishments in which records of hours were not kept, and for which compliance with the decree, therefore, could not be proved, were omitted from the published list.

hour to experienced female and minor employees and not less than sixty-five per cent. of that rate to female and minor learners and apprentices as specified in the decree:—

Akerly Manufacturing Company, Reading.
 American Brush Company, Springfield.
 Bowditch, John F., Boston.
 Burton, A. & E., Company, Cambridge.
 Fiberloid Company, Springfield.
 Florence Manufacturing Company, Northampton.
 Good, W. P., Brush Company, Boston.
 Hardy, Frank H., Andover.
 Jordan, Samuel E., Malden.
 Pushee, J. C., & Sons, Boston.
 Ramus, Christian F. W., East Boston.
 Whiting, John L., J. J. Adams Company, Boston.

In June and July, 1915, three firms were refusing to pay the rates, and 5 women, or 1 per cent. of the number for whom wage records were taken, were accordingly receiving lower wages than those set in the decree of Aug. 15, 1914. The number and proportion of violations of the decree have therefore decreased materially since the publication of names, and have probably at the present time reached as low a percentage as can be expected under any law. In both years all of the establishments failing to pay the rate were small factories employing less than 15 women.

No employer has taken advantage of that provision of section 6 of the minimum wage law¹ which permits an employer, who believes that conformance to the rates would prevent his doing business at a reasonable profit, to secure a judicial review of the order of the Commission.

The following table, showing comparative rates for 1913 and 1915, shows equally striking differences between the rates scheduled in 1913 and the rates scheduled in 1915. In comparing rates and actual earnings it is to be noted that since the decree for the brush industry was made on the basis of an hourly rate, workers at the minimum who are out of the factory for a few hours will appear in the table of earnings as receiving considerably less than the \$8.37 which would be paid for a full fifty-four hours' work.

¹ Section 6, chapter 706, Acts of 1912, as amended.

Weekly Rates for All Establishments, 1913 and 1915.

| YEAR. | NUMBER AND PER CENT. OF WORKERS WITH WEEKLY RATES OF — | | | | | | | | | | | | | | | |
|-------|--|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|---------------|-----------|----------|-----------|
| | UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$6. | | \$6 AND UNDER \$7. | | \$7 AND UNDER \$8. | | \$8 AND UNDER \$9. | | \$9 AND OVER. | | TOTAL. | |
| | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. |
| 1913, | 1 | .3 | 45 | 11.5 | 134 | 34.1 | 115 | 29.1 | 57 | 14.5 | 19 | 4.9 | 23 | 5.6 | 393 | 100 |
| 1915, | - | - | - | - | 29 | 10.5 | 18 | 6.6 | 10 | 3.6 | 187 | 68.0 | 31 | 11.3 | 275 | 100 |

NOTE. — Of the total 597 persons whose records were studied, weekly rates were not available for 204 (1913). Of the total 485 persons whose records were studied, weekly rates were not available for 210 (1915).

The increases in wages which have occurred under the operation of the decree are shown in the following tables, affording comparison between earnings in 1913 and earnings in 1915. The percentage of women workers who earned less than \$6 in the week selected for comparison was 61.4 in 1913 and only 19.8 in 1915. The percentage earning over \$9 increased from 10.2 to 19.4, showing that wages have tended to increase even above the minimum,¹ or, in other words, that the minimum does *not* tend to become the maximum.

¹ At 15½ cents an hour the minimum for fifty-four hours is \$8.37.

Weekly Earnings for the Second Week in June, 1913: by Occupations.

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS EARNING — | | | | | | | | | | | | | | | |
|--|---|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|------------|--------------------|------------|---------------|-------------|------------|------------|
| | UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$6. | | \$6 AND UNDER \$7. | | \$7 AND UNDER \$8. | | \$8 AND UNDER \$9. | | \$9 AND OVER. | | TOTAL. | |
| | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. |
| Brush making, | 13 | 9.4 | 38 | 27.6 | 43 | 30.4 | 17 | 12.3 | 16 | 11.6 | 5 | 3.6 | 7 | 5.1 | 138 | 100 |
| Finishing, | 14 | 10.1 | 44 | 31.9 | 41 | 29.7 | 10 | 7.2 | 7 | 5.1 | 6 | 4.4 | 16 | 11.6 | 138 | 100 |
| Setting, | 9 | 12.7 | 8 | 11.3 | 10 | 14.1 | 19 | 26.7 | 10 | 14.1 | 9 | 12.7 | 6 | 8.4 | 71 | 100 |
| Nailing, | 4 | 13.3 | 5 | 16.7 | 12 | 40.0 | 5 | 16.7 | 1 | 3.3 | 1 | 3.3 | 2 | 6.7 | 30 | 100 |
| Cementing, | 4 | 18.2 | 5 | 22.7 | 6 | 27.3 | 3 | 18.7 | 2 | 9.1 | 1 | 4.5 | 1 | 4.5 | 22 | 100 |
| Packing and shipping, | 1 | 4.5 | 11 | 50.0 | 6 | 27.3 | 3 | 18.7 | — | — | 1 | 4.5 | — | — | 22 | 100 |
| Drawing, | 4 | 20.0 | 4 | 20.0 | 2 | 10.0 | 3 | 15.0 | 1 | 5.0 | — | — | 6 | 30.0 | 20 | 100 |
| Soldering, | 8 | 61.5 | 1 | 7.7 | 1 | 7.7 | 3 | 23.1 | — | — | — | — | — | — | 13 | 100 |
| Hammering, | — | — | — | — | 3 | 60.0 | 2 | 40.0 | — | — | — | — | — | — | 5 | 100 |
| Less than ten workers, | 2 | 5.0 | 5 | 12.5 | 5 | 12.5 | 4 | 10.0 | 5 | 12.5 | 6 | 15.0 | 13 | 32.5 | 40 | 100 |
| Miscellaneous machine processes, | 4 | 30.7 | 2 | 15.4 | 3 | 23.1 | 2 | 15.4 | 1 | 7.7 | — | — | 1 | 7.7 | 13 | 100 |
| More than one process, | — | — | — | — | 3 | 33.3 | 2 | 22.3 | 3 | 33.3 | — | — | — | — | 9 | 100 |
| Total, | 63 | 12.1 | 123 | 23.6 | 124 | 25.7 | 73 | 14.9 | 46 | 8.8 | 29 | 5.6 | 53 | 10.2 | 531 | 100 |

Weekly Earnings for the Second Week in June, 1915: by Occupations.

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS EARNING — | | | | | | | | | | | | | | | |
|--|---|------------|--------------------|------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|---------------|-------------|------------|------------|
| | UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$6. | | \$6 AND UNDER \$7. | | \$7 AND UNDER \$8. | | \$8 AND UNDER \$9. | | \$9 AND OVER. | | TOTAL. | |
| | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. |
| Brush making, | 5 | 2.9 | 15 | 8.9 | 13 | 7.7 | 24 | 14.3 | 30 | 47.3 | 15 | 8.9 | 17 | 10.1 | 169 | 100 |
| Finishing, | 2 | 2.4 | 4 | 4.7 | 12 | 14.1 | 20 | 23.5 | 23 | 27.1 | 7 | 8.2 | 17 | 20.0 | 85 | 100 |
| Setting, | 1 | 1.8 | 6 | 10.7 | 7 | 12.5 | 7 | 12.5 | 6 | 10.7 | 13 | 23.2 | 16 | 23.6 | 56 | 100 |
| Nailing, | - | - | - | - | - | - | 1 | 5.9 | 2 | 11.8 | 3 | 17.6 | 11 | 64.7 | 17 | 100 |
| Cementing, | - | - | - | - | 2 | 20.0 | 2 | 20.0 | 5 | 50.0 | - | - | 1 | 10.0 | 10 | 100 |
| Packing and shipping, | - | - | - | - | 3 | 15.0 | 5 | 25.0 | 3 | 15.0 | 2 | 10.0 | 7 | 35.0 | 20 | 100 |
| Drawing, | 2 | 9.1 | 2 | 9.1 | 1 | 4.5 | 4 | 18.2 | 1 | 4.5 | 7 | 31.8 | 5 | 22.8 | 22 | 100 |
| Soldering, | - | - | - | - | - | - | 1 | 20.0 | 3 | 60.0 | 1 | 20.0 | - | - | 5 | 100 |
| Hammering, | - | - | - | - | 1 | 33.3 | - | - | 2 | 66.7 | - | - | - | - | 3 | 100 |
| Less than ten workers, | 1 | 1.7 | 1 | 1.7 | 8 | 14.1 | 6 | 10.5 | 14 | 24.6 | 9 | 15.8 | 18 | 31.6 | 57 | 100 |
| Miscellaneous machine processes, | 3 | 10.0 | 3 | 10.0 | 1 | 3.4 | 21 | 70.0 | 1 | 3.3 | - | - | 1 | 3.3 | 30 | 100 |
| More than one process, | 2 | 18.2 | - | - | 1 | 9.1 | 2 | 18.2 | 3 | 27.2 | 2 | 18.2 | 1 | 9.1 | 11 | 100 |
| Total, | 16 | 3.3 | 31 | 6.4 | 49 | 10.1 | 93 | 19.2 | 143 | 29.5 | 59 | 12.1 | 94 | 19.4 | 485 | 100 |

This remarkable increase in wages must be considered in connection with the course of the industry during the same period. The comments made by employers of women in the brush industry have differed widely in their bearing. In common with the previous inspections, the inspection of 1915 brought out a strong protest against prison-made brushes. One firm claimed that on the cheaper grades of brushes the minimum wage requirements were only a secondary consideration, that of first importance being the prison competition. Another firm employing large numbers of persons has claimed, on the contrary, that the minimum wage requirements have been of great detriment to its business, causing it to refuse large orders and discharge many of its low-paid women employees. This establishment has, however, conformed to the decree in every respect.

Other employers brought out the failure of the European bristle supply during the war, a consequent cutting short of work, and the necessity of buying bristles in the Orient. Certain manufacturers stated that no effects whatsoever had been felt from the operation of the minimum wage law; others mentioned the dullness of business, but ascribed it to other causes. One employer spoke of the necessity of discharging a number of setters who were not able to earn the specified rates, and the discontinuance of that particular line of work; the employer referred to was, however, employing the same number of women in his factory as before the decree went into effect. Another employer, who stated the difficulty to be the problem of finding girls skilled enough to earn the high rates, was employing more women in his factory than before the rates went into effect.

In attempting to ascertain the effect of the establishment of minimum wage rates upon any industry two questions should be taken into consideration: (1) what are the surest indices of the prosperity of the business; and (2) are the effects indicated, whether showing prosperity or depression for the industry, the results of the operation of minimum wage determinations or of other factors in the industrial situation. The latter is of especial importance in a year like the present, when common opinion attributes to the Euro-

pean war the depression and unemployment in certain industries and the apparently abnormal expansion in others.

The value of the output and the number of employees are two of the indices of business conditions which operate with comparative quickness in showing changes in the industry, and are more significant in reflecting temporary fluctuations than the value of stock, rate of dividend or grade of credit.

"Statistics of Manufactures"¹ for the year 1913 contains the latest information published by the Massachusetts Bureau of Statistics concerning the value of the product, the value of the stock and materials used and similar items. Through the courtesy of the Director of the Bureau, however, advance information on the statistics of the industry for 1914 has been placed in the hands of the Commission, and a comparison of the status of the brush industry in 1913 and in 1914, after the application of the decree, is therefore afforded.

| | 1913. ² | 1914. ³ |
|--|--------------------|--------------------|
| Number of establishments, | 27 | 30 |
| Capital invested, | \$2,771,038 | \$3,286,997 |
| Value of stock and materials used, | \$2,059,146 | \$2,232,684 |
| Value of product, | \$3,740,615 | \$3,914,029 |

The reinspections made by the agents of the Commission furnish a basis for conclusions as to changes in the numbers employed. For 16 of the 19 brush firms employing women numbers were available for both 1913, when the original inspection was made, and 1915, the year following the decree, when the third inspection was made. (One firm refused information concerning male employees in 1915, one was out of business in 1915, and one had not been inspected in 1913.) For these 16 firms the total number of women employed has increased from 332 to 334; the total number of minors employed has increased from 36 to 51; and the total number of men employed has decreased from 472 to 417.

¹ Bureau of Statistics, Twenty-eighth Annual Report on the Statistics of Manufactures, for the year 1913. Boston, 1914.

² Statistics of Manufactures for the Year 1913, p. 3.

³ Advance material furnished by the Bureau of Statistics.

It is obvious, therefore, that for this industry the establishment of minimum wages has not had the effect at times prophesied for it, namely, of throwing many women and minors out of work and encouraging instead the employment of men and the few skilled women. It is of course possible that if there were available the numbers employed by the firm which refused information concerning men the conclusions in this respect would be changed. In such an industry as the one under consideration, however, where the opposition to the principle of minimum wage is said to have influenced to some extent the policy of the firm referred to in employing labor, the effect upon the industry as a whole is the more significant aspect.

It will be seen from the figures quoted above that owing to the decrease in the number of men, the total number of all classes employed in these 16 establishments has decreased from 840 to 802. This conclusion is reinforced by the advance figures furnished by the Massachusetts Bureau of Statistics, which show that the average number employed decreased from 1,566¹ in 1913 to 1,435² in 1914. It is significant in this connection that the unemployment situation throughout the industries of the State has been almost an unprecedented one during the last twelve months, and that decrease in employment in this industry is therefore but an aspect of a general tendency. In discussing the percentage of unemployment for the quarter ending Dec. 31, 1914, the following statement is made by the Massachusetts Bureau of Statistics³ regarding unemployment in trade union membership: —

The present percentage is higher than any corresponding percentage reported since the Bureau began to collect statistics of this character at the close of March in 1908 when (immediately following the severest stress of the period of industrial depression which began in the fall of 1907) the percentage was 17.9.

¹ Statistics of Manufactures for 1913, p. 3.

² Advance material furnished by the Bureau of Statistics.

³ Bureau of Statistics, Twenty-eighth Quarterly Report on Unemployment in Massachusetts, quarter ending Dec. 31, 1914, p. 1.

Three months later the situation remained serious, although a slight improvement had set in. The Bureau of Statistics made the following statement at that time:¹ —

Although the present percentage is higher, with one exception, than any corresponding percentage reported for the close of March since the Bureau began to collect statistics of this character in 1908, it is less by nearly two points than the corresponding percentage for Dec. 31, 1914, notwithstanding the fact that the March percentage is usually higher than the next preceding December percentage. These returns, therefore, indicate an apparent improvement over conditions prevailing at the close of December last, and while large numbers had not actually returned to work at the end of March, and the percentage accordingly remained high, many of the reports were, nevertheless, decidedly optimistic in tone with reference to the immediate future, and in marked contrast with the rather disheartening reports received at the close of December, 1914.

At the end of June, 1915, the situation was still abnormal, although improvement was manifested.²

Although the present percentage (10.6) is high, as compared with the average percentage (6.9) for the close of June during the six-year period 1909-14, it very nearly approaches the corresponding percentage (9.9) for the close of June in 1914.

The allegation has sometimes been made that the comparatively slow growth of the industry has been due to the effects of the establishment of minimum wages. Whether or not the output could have been larger or the numbers employed greater, in view of the conflict in Europe, is the crux of the situation. The conclusions previously quoted from the reports of the Bureau of Statistics show industrial maladjustment to be general throughout the State. Nevertheless, the compliance of practically every employer with the decree and the large increases in the wages of female employees bear witness to the fundamentally healthy condition of this industry.

¹ Bureau of Statistics, Twenty-ninth Quarterly Report on Unemployment in Massachusetts, quarter ending Mar. 31, 1915, pp. 1, 2.

² Bureau of Statistics, Thirtieth Quarterly Report on Unemployment in Massachusetts, quarter ending June 30, 1915, p. 1.

In short, the effects of the brush decree upon the industry are found to be as follows: the decree has been complied with in practically every instance. The increases in wages have been large throughout the industry, and at the same time the capital invested in the industry and the value of the product have materially increased. The employment of women and minors has not given way to the employment of men, nor has the minimum wage tended to become the maximum.

WAGES OF WOMEN IN THE PAPER-BOX FACTORIES IN MASSACHUSETTS.

STATISTICS OF MANUFACTURE.

The rapid development of the paper-box industry during the past sixty years has paralleled the enormous increase in all manufactured products. The demand for paper boxes is secondary and measures the amount and variety of products which now go to the consumer in pasteboard containers. Recent reorganization of both wholesale and retail selling has accelerated the output. It has been found that the value of many articles is enhanced if they are displayed for sale or delivered to the consumer in boxes. This is true of commodities for which cleanliness is of especial importance, as with toilet accessories, since guaranteeing to the purchaser the "original package" gives him the satisfaction of feeling that the article he buys, whether toothbrush, handkerchief or absorbent cotton, has not been handled or soiled during its progress from the manufacturer to his own hands. It is also true where the article is more attractive or better preserved when boxed, as with soap, dentifrices and food products. In the growth of the candy trade, the increasing use of ready-to-wear garments and the prevalence of trade-marked goods are other instances of the expanding use of paper boxes, not only due to the growth of the industries themselves, but also in response to the changing tastes of the consumer. To the wholesaler and the jobber the boxed article means increased convenience in transportation and display, as in the case of such commodities as candy, dry

goods, hardware and stationery supplies. For these reasons the fortunes of the paper-box industry have come to be bound up with those of the industries which it supplements, and individual box factories come into existence according to the degree to which purchasers learn to prefer boxed goods.

Since 1849, the first year for which statistics of manufacture of fancy¹ and paper boxes were collected for the Federal Census, the industry has increased 12,443.1 per cent., rated by the value of the product, and the average number of wage earners employed has increased 5,403.3 per cent. Progress by decades has been irregular, as shown by the following tables:—

Manufacture of Fancy and Paper Boxes,² United States, 1849-1909.

| YEAR. | Number of Establishments. | Wage Earners (Average Number). | Wages. | Cost of Materials. | Value of Products. | Value added by Manufacture. |
|-----------------|---------------------------|--------------------------------|--------------|--------------------|--------------------|-----------------------------|
| 1909, | 949 | 39,514 | \$14,015,383 | \$25,716,241 | \$54,450,015 | \$28,733,774 |
| 1904, | 796 | 32,082 | 10,207,827 | 16,685,826 | 36,866,589 | 20,190,763 |
| 1899, | 729 | 27,653 | 8,151,625 | 11,765,424 | 27,316,317 | 15,550,893 |
| 1889, | 588 | 18,949 | 5,827,099 | 7,893,941 | 18,805,330 | 10,911,389 |
| 1879, | 369 | 9,678 | 2,373,948 | 3,578,827 | 7,665,553 | 4,086,726 |
| 1869, | 249 | 4,632 | 1,258,652 | 1,592,976 | 4,029,659 | 2,436,683 |
| 1859, | 110 | 1,601 | 358,658 | 467,350 | 1,162,777 | 695,427 |
| 1849, | 82 | 718 | 139,764 | 187,796 | 434,104 | 246,306 |

¹ Neither the Federal Census nor the Massachusetts Statistics of Manufactures gives figures for the manufacture of paper boxes as distinct from "fancy" boxes. The following description of the classification used appears on pp. 433 and 434 of Volume VIII. of the thirteenth census: "The establishments in this classification manufacture a large variety of plain and metal-edged boxes, made of paper, newsboard or cardboard, for confectionery, millinery, small cigars, cigarettes, etc. Cartons, folding boxes, mailing cases, shipping drums, charlotte-rusee boxes, holders and bonbon cups are among the articles reported. Although paper and wood pulp are the principal materials, the products also include lithographed, lacquered and plain tin boxes, tea caddies and canisters of tin, and fancy boxes of wood covered with cretonne, silk, tapestry and similar textiles."

² United States thirteenth census, Vol. VIII., p. 434.

Increase¹ in the Value of Product, Fancy and Paper Boxes, 1849-1909.

| YEAR. | Value of Product. | Amount of Increase. ¹ | Per Cent. of Increase. |
|-----------------|-------------------|----------------------------------|------------------------|
| 1909, | \$54,450,015 | \$27,133,698 | 99.3 |
| 1899, | 27,316,317 | 8,510,987 | 45.3 |
| 1889, | 18,805,330 | 11,139,777 | 145.3 |
| 1879, | 7,665,553 | 3,635,894 | 90.2 |
| 1869, | 4,029,659 | 2,866,832 | 246.6 |
| 1859, | 1,162,777 | 728,673 | 167.9 |
| 1849, | 434,104 | - | - |

The large increase in the number of workers employed has occurred in spite of the fact that the introduction of machinery during the past sixty years has characterized almost all forms of the industry. Although hand work is still used on certain types of high-grade boxes, by far the larger part of the output is now distinctly a machine product. At the same time, the census figures show that the number of employees has not increased so fast as the value of the product or the total amount of wages paid. The number of establishments, although it has grown from 82 to 949, shows relatively the smallest gain, demonstrating the fact that in this, as in many other industries, the size of the ordinary manufacturing plant has been steadily increasing.

According to the census statistics for 1909, Massachusetts takes third place in the fancy and paper box manufacture of the country, and has 10.6 per cent. of the value of the total product.² New York stands first and Illinois second. In 1913, according to the figures given in the Massachusetts Statistics of Manufactures,³ the State had 95 establishments, employing 4,295 workers, of whom 2,807 were women, with a capital of \$4,054,193 and an annual product valued at \$6,898,723. The following tables present an analysis of the place of Massachusetts in the fancy and paper box industry and a comparison of the State with other States: —

¹ Computed from Table 210, p. 434, Vol. VIII., thirteenth census.

² United States thirteenth census, Vol. VIII., pp. 660, 661.

³ Massachusetts Bureau of Statistics, Statistics of Manufactures, 1913, p. 2.

Statistics of Manufacture (Fancy and Paper Boxes).

| | CENSUS RETURNS FOR 1900. ¹ | | Statistics of Manu- factures for 1913, Massachu- setts. |
|---|--|---------------------|--|
| | United States. | Massachu- setts. | |
| 1. Number of establishments, | 949 | 99 | 95 |
| 2. Capital, | \$35,475,398 | \$2,939,285 | \$4,054,193 |
| 3. Value of products, | \$54,450,015 | \$5,757,611 | \$6,598,723 |
| 4. Value added by manufacture (product less cost of materials), | \$28,733,774 | \$3,038,164 | \$3,496,091 |
| 5. Cost of materials used, including fuel and rent of power, | \$25,716,241 | \$2,719,447 | \$3,402,632 |
| 6. Expense (rent, tax, contract, other), | \$4,789,129 | \$458,813 | - ² |
| 7. Salaries, | \$3,708,595 | \$350,887 | - ² |
| 8. Wages, | \$14,015,383 | \$1,556,931 | \$1,953,130 |
| 9. Total cost, | \$48,229,348 | \$5,086,078 | - ² |
| 10. Value of product less total cost, | \$6,220,667 | \$671,533 | - ² |
| 11. Employees: — | | | |
| Number of salaried officials and clerks, | 3,239 | 295 | - ² |
| Average number of wage earners employed during the year, | 39,514 | 3,838 | 4,295 |
| Male, 16 years of age and over, December 15, | 14,198 | 1,322 | 1,413 ³ |
| Female, 16 years of age and over, December 15, | 25,961 | 2,629 | 2,308 ³ |
| Female, under 16 years of age, December 15, | 2,590 | 243 | 599 ⁴ |

¹ United States thirteenth census, Vol. VIII., pp. 518-521, 660, 661.² Not taken by the Massachusetts Bureau of Statistics.³ This is the number of employees, eighteen years of age and over, December 13.⁴ This is the number of employees under eighteen years of age, December 13.

Manufacture of Fancy and Paper Boxes by States.¹

| STATE. | Number of Estab-lishments. | Number engaged in Industry. | Capital. | Value of Product. |
|--|----------------------------|-----------------------------|-----------|-------------------|
| California, | 19 | 703 | \$730,934 | \$964,983 |
| Connecticut, | 38 | 2,074 | 2,337,205 | 2,910,697 |
| District of Columbia, | 3 | 99 | 43,811 | 68,300 |
| Georgia, | 8 | 367 | 659,082 | 1,139,935 |
| Illinois, | 61 | 4,509 | 3,813,498 | 6,349,621 |
| Indiana, | 13 | 609 | 623,775 | 781,558 |
| Iowa, | 6 | 145 | 95,811 | 127,704 |
| Louisiana, | 3 | 136 | 89,337 | 173,399 |
| Maine, | 10 | 308 | 251,773 | 303,778 |
| Maryland, | 17 | 770 | 733,288 | 852,753 |
| Massachusetts, | 99 | 4,209 | 2,939,285 | 5,757,611 |
| Michigan, | 19 | 1,427 | 1,895,567 | 2,653,416 |
| Minnesota, | 11 | 666 | 928,065 | 1,023,015 |
| Missouri, | 27 | 1,237 | 932,858 | 1,376,340 |
| New Hampshire, | 12 | 192 | 123,219 | 272,832 |
| New Jersey, | 46 | 2,321 | 1,931,595 | 2,674,539 |
| New York, | 315 | 12,702 | 8,072,393 | 14,233,672 |
| North Carolina, | 4 | 86 | 53,656 | 86,747 |
| Ohio, | 46 | 2,777 | 2,940,735 | 3,635,190 |
| Pennsylvania, | 118 | 5,050 | 3,421,711 | 5,183,847 |
| Rhode Island, | 9 | 542 | 326,967 | 499,419 |
| Tennessee, | 6 | 227 | 148,284 | 257,501 |
| Texas, | 3 | 87 | 221,751 | 114,103 |
| Vermont, | 3 | 42 | 21,400 | 42,000 |
| Virginia, | 10 | 605 | 337,008 | 412,684 |
| Washington, | 6 | 125 | 119,526 | 196,901 |
| Wisconsin, | 15 | 907 | 1,079,774 | 1,317,389 |
| All other States, ² | 22 | 646 | 703,090 | 1,040,081 |

¹ United States thirteenth census, Vol. VIII., pp. 660, 661.² All other States embrace: Alabama, 2 establishments; Colorado, 3; Delaware, 1; Kansas, 2; Kentucky, 2; Nebraska, 2; Oklahoma, 1; Oregon, 4; South Carolina, 1; Utah, 1; West Virginia, 3.

Manufacture of Fancy and Paper Boxes in Massachusetts, 1909-13.¹

| YEAR. | Estab-lish-ments. | Capital invested. | Value of Stock and Materials used. | Amount of Wages paid during the Year. | Average Yearly Earnings. | WAGE EARNERS EMPLOYED. | | | | | Value of Product. |
|-------|-------------------|-------------------|------------------------------------|---------------------------------------|--------------------------|------------------------|----------|-------------|------------------|------------------|-------------------|
| | | | | | | AVERAGE NUMBER. | | | Smallest Number. | Greatest Number. | |
| | | | | | | Males. | Females. | Both Sexes. | | | |
| 1909, | 99 | \$2,930,285 | \$2,710,447 | \$1,556,931 | - 1 | - 2 | 3,838 | 3,582 | 4,222 | \$5,757,611 | |
| 1910, | 92 | 3,122,751 | 2,898,973 | 1,653,090 | \$412 65 | 1,348 | 2,658 | 4,006 | 3,430 | 4,712 | 5,954,129 |
| 1911, | 96 | 3,510,073 | 2,967,218 | 1,746,520 | 417 83 | 1,431 | 2,749 | 4,180 | 3,557 | 4,784 | 6,281,142 |
| 1912, | 95 | 3,721,210 | 3,087,662 | 1,844,745 | 440 69 | 1,419 | 2,767 | 4,186 | 3,577 | 4,828 | 6,710,376 |
| 1913, | 95 | 4,054,193 | 3,402,632 | 1,953,130 | 454 75 | 1,488 | 2,907 | 4,295 | 3,809 | 4,826 | 6,898,723 |

¹ Massachusetts Bureau of Statistics, Statistics of Manufactures, 1909-13.

² No figures given.

METHOD AND SCOPE OF THE INQUIRY.

The study of paper boxes by this Commission was made in the months of February, March and April, 1915. It is concerned with 24 establishments, situated in 15 cities and towns of the State. In these paper-box factories a transcript of the pay-roll records for each female employee was taken for a period covering the fifty-two weeks preceding the date of the initiation of the investigation. Only 4 of the 24 factories kept records of the number of hours worked by their female employees. In the case of each of these 4 factories the records of hours were also transcribed by the agents of the Commission. In as many cases as possible schedules were filled out by the women workers themselves, in order that the Commission might have available such information as age, marital condition, living arrangements and length of experience. In addition, an inspection of the premises was made for the purpose of studying the occupations. The results of the analysis of the schedule material will be found in the section entitled "Analysis of the Wage Situation."

In accordance with the duties of the Commission as prescribed by the statute, the inquiry has been limited to ascertaining wages and rates for the various occupations, with such other matters as are most intimately connected with that subject. This procedure necessitated the omission of many subjects which might have proved both interesting and valuable as matters of public knowledge in connection with the wage situation. For example, the matters of overtime, sanitation, accidents and more detailed information as to the living arrangements and expenses of the women employees have a definite bearing on the matter of wages in any given employment. Moreover, these matters are under the jurisdiction of other boards and commissions in this State, and certain information concerning them appears from those sources from time to time. Consequently, the material gathered by the Commission is limited in scope and comprises only the data which in the experience of the Commission have proved to be most pertinent and useful in the attempt to improve the wage situation.

THE PROCESS OF MANUFACTURE.

The operations involved in the manufacture of paper boxes depend largely upon the kind of box manufactured. In general, paper boxes may be classified as "folding" and "built-up" boxes. Examples of the former, which take their name from the fact that they are shipped in a flat or folded condition and set up by the user, are butter, egg and ice-cream cartons, and patent medicine, tooth brush and paste-tube containers. Built-up boxes are shipped ready for use. The simplest variety is the "set-up" box, which is an unlined, untrimmed container, merely glued or stayed at the corners, and used chiefly for packing and shipping smaller boxes and other light-weight articles. The more elaborate boxes may be covered, lined, "necked" — that is, fitted with a neck or shoulder so that the cover may lie flush with the sides of the box — and decorated with paper lace, ribbon and pictures. Candy, soap, jewelry and shoe boxes are examples of the more complicated boxes.

The preliminary box-making processes, *cutting* and *scoring*, are machine operations and are usually performed by men. The operator of the scoring machine feeds sheets of pasteboard into the machine, which cuts them into the proper size and cuts or creases the lines along which the box is to be bent into form. A corner-cutting machine then cuts out the corners, in preparation for turning down the sides and ends of the boxes. When folding boxes are manufactured these processes are all performed by a large die cutting and creasing machine, which cuts out and creases the entire box form in one piece. In many cases trade names, designs and description of contents of folding boxes are printed on the pasteboard prior to cutting and creasing. In this printing department of the preliminary work women are occasionally employed as cylinder press feeders. Their work is performed standing on high platforms and consists in lifting the uncut sheets of cardboard and feeding them into the presses.

Staying. — The work of staying is done by both hand and machine. The latter is accomplished in two ways, — by a one-corner stay machine and by a quadruple stayer.

One-corner staying requires a separate operation to secure each corner. The machine has a projecting anvil over which is placed successively each of the two edges which are to form the corner of the box. The motion of the machine, controlled by foot, is the rapid descent of the head which drops with varying amounts of pressure, depending upon the thickness of the board used. This head carries either gummed tape or wire rivets, according to the style of the machine, and the corners are secured by the application of these. The one-corner stayer is the most dangerous machine in the industry unless effective guards are used. The styles of guards which have been most frequently used have been removable at the option of the operator and, being a hindrance to speed, usually were discarded. Newer guards, such as the split link and permanent side guards, are being used with entire effectiveness.

The quadruple stayer does in one process what the one-corner stay machine does in four. There are two types of the machine. One of them takes a single sheet of cardboard after it has been cornered, and in one operation turns up the sides and ends of the box and glues a gummed tape over each of the four corners. This is called the auto box machine. The other type, or double ender, puts the ends on a single piece which forms the bottom and sides and secures them in one operation.

In hand staying the gummed tape is applied by hand to the corners of the box as the edges to form the corner are held over a form.

Machine Covering. — When a box or box lid is entirely covered by paper it is generally done by machine. Some boxes are "loose-wrapped," in which case the paper is glued only on the edge which is turned down on the inside of the box. Others have the surface of the paper entirely glued and are called "tight-wrapped."

In the latter case the paper is first passed through a gluing machine. This machine has a double set of rollers, the lower pair revolving in a fount of glue. The operator, called a gluer-off, passes the paper through the rollers where it receives a film of glue, and places it on a revolving table from

which it is taken when needed by the operator of the covering machine.

The box to be covered is then registered at the proper place on the paper and put on a form with the paper sticking to the bottom. The machine is started by a foot treadle, and in one operation the box is lowered into a well and is completely covered and raised again, at which time it is replaced with another by the operator.

Hand Covering. — On high-grade fancy boxes, such as candy and jewelry boxes, covering is done by hand. In this case the operator may herself apply the glue to the paper with which she covers the boxes, or glued papers may be delivered to her on a moving belt, which in turn is fed by a girl whose work is like that of the gluers-off previously described. This operation and other hand processes not otherwise specified on hand-made boxes are called *bench work* in the statistical tables which follow.

Stripping. — If a box is not to be completely covered with paper or hand covered it is stripped, that is, papered along the ends and sides. The operator places the box on a revolving form which may be turned by hand as the box is stripped, or which may be controlled by machinery. In either case the box is revolved and the paper passed about it and cut from the long strip by the lowering of a knife. The strip of paper first passes over a cylinder revolving in glue. To give additional strength to the box, or as a trimming, a plain or gilt tape is sometimes run parallel to the covering strip and applied to the top or bottom of the box, either completely under the covering, or, in the case of the gilt tape, adjusted to show at the edge.

Turning in. — As the box comes from the stripper the edges of the paper protrude beyond the top and bottom of the box. The paper is then turned over the top of the box and along the bottom by the operator herself or by a helper, who is called a turner-in. The helper also piles the finished boxes and removes them to the place where they are to be inspected and closed.

Topping. — Lids for boxes which have been stripped have the top paper put on by a similar process. The operator ad-

justs the paper as it comes from the machine to the top of the box, lowers a lever which drops a knife, and as it cuts off the paper she smooths it out with her hand so that it will adhere to the cardboard.

Lacing. — The lace paper with which fancy boxes and box trays are trimmed is attached by both hand and machine processes. Hand lacing is usually done by girls in pairs, one applying the glue to the lace, and the other attaching it to the box.

In machine lacing the lace is automatically glued by an oscillating brush which passes over it as it rests on a projecting front of the machine. The box is fitted over the lace and pressure applied to secure it.

Closing and Inspecting. — The floor work is done by women called closers and inspectors. In the examination imperfect boxes are discarded, plain boxes are closed and fancy boxes made ready for shipment. If a box has lace on it this is turned in before the lid is put on; if the box is one containing trays, these are inserted before closing. In some factories, where better-grade boxes are made, the closers and inspectors pack them in rough cartons; otherwise they are set aside and removed by men for shipment.

Labeling. — In the case of some special large orders of boxes the name of the contents, form, trade-mark, stock number or other necessary information may be printed on the paper before the box is covered. Where a standard box size is manufactured to sell for a variety of uses, a label is usually applied after the box has been closed. The experienced worker glues and pastes labels with great dexterity and accuracy, sometimes adjusting a glued label to each of her fingers and thumb of one hand, and with a quick movement of the other affixing them to the boxes.

Machine Folding. — Certain types of folding boxes of simple construction are completely made in one operation by a high-speed automatic machine. This machine is usually fed by men. It spreads a film of glue over the edges along which the box is to be glued, and presses it against the side to secure it. The boxes are delivered from the machine finished, in automatically counted piles of 50 or 100. Other

folding boxes, such as ice-cream and small butter and egg cartons, are caught and glued at the edges by machine or by hand.

Hand Folding. — In general, the hand operations on folding boxes require less skill than the hand processes on built-up boxes. The work consists in creasing the boxes along the lines indicated, and with glue or tape securing them into completed boxes. The gluing is often facilitated by running the boxes through rollers, behind which they drop into large baskets removed and emptied by helpers.

Helping. — Supplementary to the principal operations of box-making as they have been described are various others, ranging from unskilled general work, called helping, to special processes on highly specialized types of boxes. When a girl first enters the industry she is ordinarily started to work as a helper. Her occupation may be catching and tying folding boxes; she may be assigned to a one-corner stay machine to turn down the sides and ends before the cardboard is passed to the operator; or she may carry materials from one group of operators to another and perform various kinds of general work.

Miscellaneous. — Other occupations, involving relatively small numbers of persons, may be described briefly as follows: —

Lapping and joining is gluing two edges together, for any one of a number of purposes. One of the most usual lapping processes is gluing cardboard for making necks. After the cardboard is lapped and cut in strips these are pasted in boxes by a process known as necking.

Filling is the insertion of set-up racks and cardboard or corrugated fillings in egg cartons and boxes used for containers for bottled goods and other breakable articles.

Thumbing is the process of cutting out a half circle on either side of a box lid in order that the box may be held by a thumb and a finger when the lid is being removed.

Looping is pasting small tapes at the sides or ends of trays for boxes, so that the tray may be more easily removed.

Tape handling is gluing or tying tape handles to ice-cream cartons.

Reinforcing is pasting gummed strips around the edges of the box for strengthening purposes.

Ending is pasting ends into boxes where the waste of stock by cutting boxes from one piece of board would be great.

Doming is forcing up the tops of box lids into a convex shape.

ACCIDENT HAZARD.

The Commission has made no special study of the accident and health hazard in paper-box factories, for reasons detailed elsewhere in this report. At the same time, a brief summary of the present state of affairs in this respect, as reported by the Industrial Accident Board of this State, is necessary for a thorough understanding of the circumstances surrounding women employees in paper-box factories.

The principal dangers to which employees in paper-box factories are subject are connected with machinery peculiar to the industry, particularly the older type of poorly guarded staying machine which is elsewhere described. According to the summaries presented in the first annual report of the Industrial Accident Board of Massachusetts,¹ covering the period from July 1, 1912, to June 30, 1913, inclusive, 266 nonfatal accidents and no fatal accidents among paper-box workers were reported to the Board during that year. The percentage of accidents reported to the number of employees in the industry was 6.3. Men and women employees are not distinguished in the classification which follows:—

| CAUSE. | Number of Accidents. |
|--|-------------------------|
| Animals, insects, etc., | 2 |
| Belting:— | |
| Shifting by stick or hand, etc., | 1 |
| Burns:— | |
| Fire, | 2 |
| Hot objects, | 3 |
| Steam, hot liquids, etc., | 3 |
| Electricity:— | |
| Shocks, | 1 |
| Other generator and motor accidents, | 1 |

¹ First Annual Report of the Industrial Accident Board, 1914, pp. 245-326.

| CAUSE. | Number of Accidents. |
|---|-------------------------|
| Elevators: — | |
| Caught between car and shaft, | 2 |
| Falling down shaft (person), | 1 |
| Miscellaneous, | 2 |
| Eye injuries: — | |
| Emery wheels, | 1 |
| Falling material from overhead, | 1 |
| Falls: — | |
| Over obstructions, | 2 |
| From or with portable ladders, | 1 |
| Slipping on floor level, | 1 |
| Down stairways, | 3 |
| Miscellaneous, | 2 |
| Gears, | 3 |
| Glass: — | |
| Windows, | 1 |
| Hand labor: — | |
| Caught by material, | 11 |
| Slivers, sharp edges, corners, etc., | 21 |
| Strains from lifting, etc., | 2 |
| Struck by tools, | 3 |
| Illness, | 1 |
| Infection from trivial cuts, burns, etc., | 2 |
| Miscellaneous (unclassified), | 7 |
| Nails: — | |
| On barrels, boxes or objects, | 4 |
| On floor or ground, | 3 |
| Playing and fooling, | 1 |
| Presses: — | |
| Printing, | 8 |
| Punch and drop and miscellaneous presses, | 9 |
| Saws, | 5 |
| Shafting, setting screws, couplings, etc., | 2 |
| Vehicles: — | |
| Animal-drawn, | 4 |
| Trucks, wheelbarrows, etc., | 1 |
| Accidents caused by machinery peculiar to special industries, | 148 |
| Occupational diseases: — | |
| Miscellaneous, | 1 |
| Total, | 266 |

The report affords certain additional information concerning the injured persons. One hundred and fifteen, or 43.2 per cent., of the persons injured were women, and the majority of the persons injured were less than thirty years of age. One hundred and sixty-six of the 266 persons injured

were disabled for less than two weeks. With regard to the nature of the disability, whether temporary or permanent, the largest number were classified as "temporary total."

METHOD OF TREATING WAGE MATERIAL.

In the preparation of the material for tabulation all records of persons who appeared on the pay roll for less than four weeks out of the fifty-two under consideration were thrown out. This was done in order that the conclusions reached might apply only to workers who could legitimately be considered a part of the normal working force of the industry. In some factories it is the custom to employ helpers or "strikers," young girls, usually between the ages of fourteen and eighteen, who assist machine operators. In cases in which the earnings of strikers were included in the weekly payments made to the operators, it was necessary to exclude the wage records from the tabulation, as it was impossible to ascertain the exact amount earned by the individuals concerned. One factory had the custom of paying wages in 48 instead of 52 payments during the year. This made the amounts incomparable with those of other factories, and they were consequently omitted from tabulation. Records for forewomen and clerical workers were also excluded.

In computing weekly earnings and hours worked each week for individual workers, the procedure for each individual was as follows: the sum of all payments made during the fifty-two week period — that is, the girl's total income from her work for the year — was found. This sum was divided by the number of weeks during which she was actually at work, as indicated by the number of weekly payments made to her. When the weekly payment was for a paid vacation, the vacation week was counted as a week actually worked. In this way her average weekly earnings for the time she was at work in the occupation under consideration were ascertained. A corresponding procedure was adopted in treating hours of work. The number of hours worked during the fifty-two week period was totaled, and this sum divided by the number of weeks actually at work, as indicated by the number of weekly payments made. The amounts paid were not always

the equivalent of a full week's work. The factory or department may have been running on short time, girls may have entered or left the factory in the middle of a week, or absences may have occurred because of illness or other individual reasons. This necessitates a slight misrepresentation in the analysis of earnings, which could be avoided only where a record of hours was kept in the factory, and even then it was not possible to ascertain to which of the above causes the short time should be ascribed. The Commission has made it a rule to follow the written record, and has attempted to present the pay-roll figures as found, without omissions or additions due to interpretations of its own.

ANALYSIS OF THE WAGE SITUATION.

The total number of women in the box-making industry for whom wage records are available for analysis is 2,178. The following tables show the amount of their earnings by classified wage groups and in connection with other factors according to which they vary, such as occupation, establishment, hours of work and the age and experience of the worker.

Table 1, (a) and (b), shows the total number of these workers classified according to their earnings. The number who earned an average of less than \$6 a week during the time when they were actually at work is 970, or 44.5 per cent. of the total. Three hundred and fifty of these employees, or 16.1 per cent., earned less than \$4 a week, and three-fourths (75.7 per cent.) earned less than \$8 a week.

The lowest paid occupations, graded according to the percentage of workers who received less than \$6 a week, are gluing off, helping, hand folding and turning in. Gluing off is a simple operation requiring little skill; turning in is practically a "helping" operation connected with stripping; hand folding is unskilled work; and helping may be one of several kinds of general or errand work through which most workers gain an introduction to the trade.

Staying, labeling, bench work, stripping and machine covering are the highest paid occupations, according to the percentages of workers who earned \$8 a week or more. All of

these operations require speed, skill and experience, at least before any high rate of output can be attained.

The weekly rates at which the workers were scheduled to be paid are shown in Table 2. Piece workers were necessarily excluded from this table, as well as all time workers whose rates were not available, so that the table shows rates for only 466 of the 2,178 persons whose wages were studied. Two points shown in this table are of especial importance: (1), the wider difference among occupations as regards rates, hand folding being the lowest and staying the highest, and (2), the large percentage (54.9) scheduled to receive less than \$6, as compared with 44.5 per cent. (Table 1 (a)) who actually received less than \$6. This is probably to be accounted for by the fact that many of the high-paid workers — for example, bench workers — who were largely on piece work could not be included in the rate table, and this table therefore represents mainly low-paid time workers.

Table 3 shows total earnings for the year for the same group of workers. Table 1 takes into account only the weeks when each girl was actually on the pay roll, and gives no indication of the time when she was not in the factory, — a period, possibly, of actual unemployment, which the earnings of the previous weeks must be stretched to cover. Table 3 gives the amounts which mean total yearly incomes to many workers, unless they belong to the group of those who live at home and draw on the wages of others in the family for their living expenses, or to the group which supplements the incomes described in the table by work in other box factories or in other occupations. Of this latter class there is possibly a large number, but no reliable information exists as to the actual extent of such supplementary employment, and such opinions as have been expressed to the Commission have been derived from sources admittedly partial in character.

According to Table 3, 31.1 per cent. of the workers received less than \$100 in the course of the year, and more than one-half (53.7 per cent.) earned less than \$250. The occupations which bring in the lowest annual earnings, graded by the percentage of workers who received less than

\$100 in the course of the year, are hand folding (68.3 per cent.), helping (56.1 per cent.), turning in (45.8 per cent.) and closing and inspecting (42.3 per cent.). The low annual earnings of workers in these occupations are to be accounted for by two facts, — the low weekly earnings in the same work, which of necessity mean low annual incomes, and the fact that it is in these occupations that the greatest amount of changing, leaving or beginning work, and moving from factory to factory, occurs. Labeling, bench work, topping and staying are the occupations in which the highest annual earnings were obtained, graded according to the proportion who earned \$400 or more during the year.

Weekly wages differ conspicuously in different establishments. Table 4 shows that in three of the factories studied more than one-half of the women employed were paid less than \$5 a week, while in two other factories not a single woman averaged less than that amount. In one establishment no girl averaged as much as \$8 a week. The different levels of wages in the various factories appear to bear very little relation to the localities in which the factories are found, to the nationality of the workers, or to the character of the product (with the one exception of wages in factories manufacturing shoe boxes, which in several instances were higher than the majority). The fact that establishments situated in practically the same locality and depending upon the same sources of labor supply are shown to pay widely differing scales of wages demonstrates the slight basis upon which the ordinary competition arguments rest. The analysis of rates of payment in Table 5 has the same bearing.

The number of hours worked each week must be taken into consideration in discussing the weekly earnings in the industry. If it were possible to ascertain the number of hours worked each week by each of the 2,178 workers studied, the figures representing wages for this number of workers could be made much more significant. Unfortunately, it is the custom in very few factories to keep records of the number of hours, and such records could therefore be obtained for only 282 of the 2,178 women employees whose wage records are analyzed.

This material regarding hours, which in Table 6 is correlated with earnings, demonstrates the normal relationship between length of time worked and amount of wages. A majority of the women averaged from forty-two to fifty hours' work a week. Table 7 shows the variation of working time in different establishments.

Table 8 shows the fluctuation of employment for all of the factories studied and among the various occupations. The figures demonstrate the extent of the flux among the working force, as a whole, and the greater instability among the comparatively unskilled and low-paid occupations. On the other hand, topping, labeling and stripping show the largest number of workers who remain at their occupations for the entire fifty-two weeks of the year. A fact previously mentioned should be noted throughout the entire discussion of the fluctuation of employment, namely, that the figures presented do not purport to portray the extent of unemployment for the industry as a whole, but merely to give a summary of the pay rolls of the 24 factories studied. It is important to note in Table 9 that similar differences exist among the various establishments, a fact not easy to account for, since the variations are apparently not related to the level of wages paid or to the character of the product.

Diagram I. shows the percentage of the total number of employees studied who appeared on the books each week in the year. Although the working period for individuals tends to vary greatly in duration, the diagram shows that from the point of view of the industry the working force does not show variation to an extreme degree. The busiest season occurs in the spring, and the dull in August, the vacation month, and midwinter.

Table 10, (a) and (b), analyzes the amounts earned each week in connection with the ages of the workers as given by themselves, and shows the tendency for wages in fairly skilled occupations to vary directly with age, until middle life is passed. Another aspect of the same situation is shown in Table 11, where earnings are found to vary directly with years of experience in the trade, up to six or seven years, after

which the increases in earnings with added experience cease to be proportionate.

It has been assumed in current discussions of minimum wages that the cost of living varies with the nature of living arrangements. A table is here presented (Table 12) which shows the living arrangements of 893 women engaged in box making. Eighty-four and one-tenth per cent. of these women workers live at home. Among the lowest paid girls the percentage at home is very large (96.5 per cent. of those who earned less than \$4 a week were at home), and decreases to approximately four-fifths (77.8 per cent.) with those who earn \$9 or more. A smaller percentage of girls earning less than \$4 appears to live at home, doubtless because of the fact that in the lower wage groups the figures are too small to justify exact conclusions. Table 13 shows that the younger workers live at home in much larger proportions than the older workers.

SUMMARY OF ANALYSIS.

A summary of the results of the investigation into the wages of women in the paper-box industry in this State shows that 44.5 per cent. earned less than \$6 a week, and that nearly one-third earned less than \$100 in the course of the year. A majority averaged between forty-two and fifty hours' work a week, and only a small proportion worked for as much as eleven months of the year. The larger number are girls less than twenty-five years of age who live with parents or relatives.

TABLE 1 (a). — Average Weekly Earnings: by Occupations.

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS EARNING — | | | | | | | | | | | | TOTAL. | | | | | |
|------------------------------------|---|------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|---------------|------------|------------|-------------|--------------|------------|
| | UNDER \$3. | | \$3 AND UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$7. | | \$7 AND UNDER \$8. | | \$8 AND UNDER \$9. | | \$9 AND OVER. | | Number. | Per Cent. | | |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | | | | |
| Bench work, | 4 | .6 | 43 | 6.4 | 87 | 13.0 | 115 | 17.2 | 120 | 18.0 | 87 | 13.0 | 70 | 10.5 | 142 | 21.3 | 668 | 100 |
| Stripping, | 5 | 1.9 | 6 | 2.3 | 14 | 5.3 | 31 | 11.8 | 53 | 20.2 | 72 | 27.4 | 38 | 14.4 | 44 | 16.7 | 263 | 100 |
| Helping, | 25 | 10.9 | 99 | 43.0 | 60 | 26.1 | 25 | 10.9 | 9 | 3.9 | 8 | 3.5 | 4 | 1.7 | - | - | 230 | 100 |
| Cleaning and inspecting, | 12 | 8.7 | 27 | 19.7 | 23 | 16.8 | 16 | 11.7 | 18 | 13.1 | 16 | 11.7 | 6 | 4.4 | 19 | 13.9 | 137 | 100 |
| Machine covering, | 1 | .9 | 2 | 1.8 | 9 | 8.1 | 14 | 12.6 | 20 | 18.0 | 31 | 28.0 | 18 | 16.2 | 16 | 14.4 | 111 | 100 |
| Labeling, | - | - | 5 | 4.8 | 10 | 9.5 | 10 | 9.5 | 14 | 13.4 | 25 | 23.8 | 23 | 21.9 | 18 | 17.1 | 105 | 100 |
| Staying, | 1 | 1.2 | 1 | 1.2 | 3 | 3.7 | 8 | 9.9 | 20 | 24.7 | 14 | 17.3 | 17 | 21.0 | 17 | 21.0 | 81 | 100 |
| Gluing off, | 1 | 1.2 | 10 | 12.5 | 37 | 46.3 | 25 | 31.3 | 3 | 3.7 | 4 | 5.0 | - | - | - | - | 80 | 100 |
| Topping, | 3 | 4.4 | 5 | 7.3 | 8 | 4.4 | 9 | 13.0 | 17 | 24.6 | 11 | 15.9 | 9 | 13.0 | 12 | 17.4 | 69 | 100 |
| Hand folding, | 12 | 19.0 | 17 | 27.0 | 15 | 23.8 | 8 | 12.7 | 7 | 11.1 | 4 | 6.4 | - | - | - | - | 63 | 100 |
| Turning in, | 2 | 8.3 | 3 | 12.5 | 5 | 20.8 | 8 | 33.4 | 5 | 20.8 | 1 | 4.2 | - | - | - | - | 24 | 100 |
| Lacing, | - | - | 3 | 23.1 | - | - | 1 | 7.7 | 2 | 15.4 | 4 | 30.7 | 3 | 23.1 | - | - | 13 | 100 |
| Miscellaneous, | 33 | 9.9 | 30 | 9.0 | 42 | 12.6 | 42 | 12.6 | 53 | 17.3 | 56 | 16.7 | 24 | 7.2 | 49 | 14.7 | 334 | 100 |
| Total, | 99 | 4.6 | 261 | 11.5 | 306 | 14.1 | 312 | 14.3 | 346 | 15.9 | 333 | 15.3 | 212 | 9.7 | 317 | 14.6 | 2,178 | 100 |

TABLE 1 (b). — Average Weekly Earnings: by Occupations (Cumulative).

| OCCUPATIONS. | PER CENT. OF WORKERS EARNING — | | | | | | | | | |
|-----------------------------------|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | Under \$10. | Under \$11. | \$9 and over. |
| Bench work, | .6 | 7.0 | 20.1 | 37.3 | 55.2 | 68.3 | 78.7 | 83.3 | 86.1 | 21.3 |
| Stripping, | 1.9 | 4.2 | 9.5 | 21.3 | 41.4 | 68.8 | 83.3 | 88.3 | 85.6 | 16.7 |
| Helping, | 10.9 | 53.9 | 80.0 | 90.9 | 94.8 | 98.3 | 100.0 | 100.0 | 100.0 | — |
| Closing and inspecting, | 8.7 | 28.5 | 45.3 | 56.9 | 70.1 | 81.8 | 86.1 | 86.1 | 86.1 | 13.9 |
| Machine covering, | .9 | 2.7 | 10.8 | 23.4 | 41.4 | 69.4 | 85.6 | 85.6 | 85.6 | 14.4 |
| Labeling, | — | 4.8 | 14.3 | 23.8 | 37.1 | 61.0 | 82.9 | 82.9 | 82.9 | 17.1 |
| Staying, | 1.2 | 2.5 | 6.2 | 16.0 | 40.7 | 58.0 | 79.0 | 79.0 | 79.0 | 21.0 |
| Gluing off, | 1.2 | 13.8 | 60.0 | 91.3 | 95.0 | 100.0 | 100.0 | 100.0 | 100.0 | — |
| Topping, | 4.4 | 11.6 | 15.9 | 29.0 | 53.6 | 69.6 | 82.6 | 82.6 | 82.6 | 17.4 |
| Hand folding, | 19.0 | 46.0 | 69.8 | 82.5 | 93.7 | 100.0 | 100.0 | 100.0 | 100.0 | — |
| Turning in, | 8.3 | 20.8 | 41.7 | 75.0 | 95.8 | 100.0 | 100.0 | 100.0 | 100.0 | — |
| Lacing, | — | 23.1 | 23.1 | 30.8 | 46.2 | 76.9 | 100.0 | 100.0 | 100.0 | — |
| Miscellaneous, | 9.9 | 18.9 | 31.4 | 44.0 | 61.4 | 78.1 | 85.3 | 85.3 | 85.3 | 14.7 |
| Total, | 4.6 | 16.1 | 30.2 | 44.5 | 60.4 | 75.7 | 85.4 | 85.4 | 85.4 | 14.6 |

TABLE 2. — *Weekly Rates: by Occupations.*

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS WITH WEEKLY RATES OF — | | | | | | | | | | | | | | TOTAL. | |
|--|--|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|---------------|-----------|---------|-----------|
| | UNDER \$3. | | \$3 AND UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$7. | | \$7 AND UNDER \$8. | | \$8 AND UNDER \$9. | | \$9 AND OVER. | | Number. | Per Cent. |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | | |
| Bench work, | — | — | 6 | 5.9 | 34 | 33.7 | 10 | 9.9 | 14 | 13.9 | 7 | 6.9 | 30 | 29.7 | 101 | 100 |
| Stripping, | — | — | — | — | 3 | 25.0 | 1 | 8.3 | 1 | 8.3 | 2 | 16.7 | 5 | 41.7 | 12 | 100 |
| Helping, | — | — | 12 | 7.4 | 45 | 27.6 | 16 | 9.8 | 3 | 1.8 | 3 | 1.8 | — | — | 163 | 100 |
| Closing and inspecting, Machine covering, | — | — | 6 | 16.2 | 1 | 2.7 | 1 | 2.7 | 6 | 16.2 | 8 | 21.6 | 15 | 40.6 | 37 | 100 |
| Labeling, | — | — | 2 | 28.6 | 1 | 14.3 | 1 | 14.3 | 2 | 28.6 | 1 | 14.3 | — | — | 7 | 100 |
| Staying, | — | — | 2 | 28.5 | 1 | 14.3 | 3 | 42.9 | — | — | 1 | 14.3 | — | — | 7 | 100 |
| Gluing off, | — | — | 2 | 10.0 | 14 | 70.0 | 4 | 20.0 | — | — | 4 | 28.6 | 7 | 50.0 | 14 | 100 |
| Topping, | — | — | 7 | 77.8 | 1 | 11.1 | — | — | 1 | 11.1 | — | — | — | — | 9 | 100 |
| Hand folding, | — | — | 1 | 33.3 | — | — | — | — | — | — | — | — | — | — | 3 | 100 |
| Turning in, | — | — | — | — | 1 | 20.0 | 4 | 80.0 | — | — | — | — | — | — | 5 | 100 |
| Miscellaneous, | — | — | 4 | 4.5 | 20 | 22.7 | 11 | 12.5 | 17 | 19.3 | 15 | 17.1 | 14 | 15.9 | 88 | 100 |
| Total, | — | — | 17 | 3.7 | 121 | 26.0 | 51 | 10.9 | 48 | 10.3 | 49 | 8.6 | 71 | 15.2 | 466 | 100 |

NOTE. — Of the 2,178 persons whose records were studied, data concerning rates were not available for 1,712, a majority of whom were piece workers.

TABLE 3. — Annual Earnings: by Occupations.

| OCCUPATIONS. | NUMBER OF WORKERS WITH ANNUAL EARNINGS OF — | | | | | | | | | | Total. |
|-----------------------------------|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|-----------------|--------------|
| | Under \$100. | \$100 and under \$150. | \$150 and under \$200. | \$200 and under \$250. | \$250 and under \$300. | \$300 and under \$350. | \$350 and under \$400. | \$400 and under \$450. | \$450 and over. | \$500 and over. | |
| Bench work, | 186 | 62 | 34 | 44 | 57 | 66 | 54 | 53 | 35 | 77 | 668 |
| Stripping, | 39 | 13 | 19 | 23 | 26 | 37 | 48 | 32 | 13 | 13 | 203 |
| Helping, | 129 | 40 | 25 | 19 | 5 | 4 | 6 | 2 | - | - | 230 |
| Closing and inspecting, | 58 | 10 | 11 | 8 | 8 | 12 | 11 | 4 | 7 | 8 | 137 |
| Machine covering, | 18 | 10 | 7 | 7 | 8 | 14 | 19 | 16 | 9 | 3 | 111 |
| Labeling, | 10 | 7 | 4 | 8 | 12 | 11 | 19 | 12 | 14 | 8 | 105 |
| Staying, | 11 | 9 | 8 | 4 | 7 | 11 | 10 | 12 | 2 | 7 | 81 |
| Gluing off, | 33 | 15 | 7 | 10 | 9 | 3 | 2 | 1 | - | - | 80 |
| Topping, | 16 | 1 | 4 | 3 | 10 | 11 | 6 | 10 | 5 | 3 | 69 |
| Hand folding, | 43 | 9 | 3 | 1 | 3 | 4 | - | - | - | - | 63 |
| Turning in, | 11 | 1 | 4 | 2 | - | 6 | - | - | - | - | 24 |
| Lacing, | 3 | - | - | 1 | 3 | 3 | 3 | - | - | - | 13 |
| Miscellaneous, | 120 | 24 | 18 | 18 | 33 | 34 | 30 | 20 | 16 | 21 | 334 |
| Total, | 677 | 261 | 144 | 148 | 161 | 216 | 298 | 163 | 101 | 140 | 2,176 |

TABLE 4. — *Average Weekly Earnings: by Establishments (Cumulative).*

| ESTABLISHMENTS. | PER CENT. OF WORKERS EARNING — | | | | | | | |
|-------------------------|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| No. 1, | .3 | 1.5 | 7.9 | 16.4 | 33.9 | 54.4 | 64.9 | 35.1 |
| No. 2, | 27.7 | 51.1 | 67.0 | 80.9 | 89.4 | 99.5 | 100.0 | - |
| No. 3, | - | 10.3 | 34.1 | 53.0 | 69.7 | 80.0 | 89.2 | 10.8 |
| No. 4, | 4.4 | 36.1 | 50.8 | 62.8 | 73.8 | 88.0 | 95.6 | 4.4 |
| No. 5, | 2.7 | 15.1 | 27.4 | 32.2 | 37.0 | 56.2 | 65.8 | 34.2 |
| No. 6, | 2.1 | 18.6 | 37.1 | 49.3 | 72.1 | 85.0 | 91.4 | 8.6 |
| No. 7, | .8 | 16.4 | 46.1 | 53.1 | 64.1 | 72.7 | 86.7 | 13.3 |
| No. 8, | 2.4 | 13.5 | 33.3 | 54.0 | 70.6 | 86.5 | 98.4 | 1.6 |
| No. 9, | - | 2.0 | 10.2 | 35.7 | 63.3 | 80.6 | 94.9 | 5.1 |
| No. 10, | 19.8 | 44.2 | 58.1 | 76.7 | 86.0 | 95.3 | 98.8 | 1.2 |
| No. 11, | - | 1.2 | 26.7 | 51.2 | 66.3 | 80.2 | 89.5 | 10.5 |
| No. 12, | 5.9 | 7.4 | 10.3 | 13.2 | 29.4 | 51.5 | 70.6 | 29.4 |
| No. 13, | - | 1.6 | 4.9 | 27.9 | 55.7 | 68.9 | 82.0 | 18.0 |
| No. 14, | 2.1 | 29.8 | 44.7 | 57.4 | 80.9 | 89.4 | 100.0 | - |
| No. 15, | 2.2 | 10.9 | 28.3 | 54.3 | 78.3 | 93.5 | 100.0 | - |
| No. 16, | 5.4 | 18.9 | 32.4 | 67.6 | 89.2 | 100.0 | 100.0 | - |
| No. 17, | 2.8 | 5.6 | 5.6 | 13.9 | 33.3 | 77.8 | 86.1 | 13.9 |
| No. 18, | - | 3.0 | 12.1 | 36.4 | 60.6 | 75.8 | 81.8 | 18.2 |
| No. 19, | 3.6 | 7.1 | 10.7 | 28.6 | 42.9 | 60.7 | 78.6 | 21.4 |
| No. 20, | - | - | - | 7.4 | 18.5 | 44.4 | 74.1 | 25.9 |
| No. 21, | - | - | 3.7 | 14.8 | 22.2 | 44.4 | 63.0 | 37.0 |
| No. 22, | - | - | - | 3.8 | 34.6 | 53.8 | 80.8 | 19.2 |
| No. 23, | - | - | 23.5 | 41.2 | 76.5 | 82.4 | 94.1 | 5.9 |
| No. 24, | - | - | 17.6 | 58.8 | 64.7 | 76.5 | 88.2 | 11.8 |
| Total, | 4.6 | 16.1 | 30.2 | 44.5 | 60.4 | 75.7 | 85.4 | 14.6 |

TABLE 5. — *Weekly Rates: by Establishments (Cumulative).*

| ESTABLISHMENTS. | PER CENT. OF WORKERS WITH WEEKLY RATES OF — | | | | | | | |
|-----------------------|---|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| No. 1. | - | - | - | 4.8 | 7.9 | 28.6 | 49.2 | 50.8 |
| No. 2. | - | 11.1 | 66.7 | 66.7 | 77.8 | 83.3 | 100.0 | - |
| No. 3. | - | - | - | 64.8 | 79.6 | 85.2 | 92.6 | 7.4 |
| No. 4. | - | 1.0 | 64.7 | 74.5 | 85.3 | 90.2 | 93.1 | 6.9 |
| No. 5. | - | 10.7 | 35.7 | 62.5 | 71.4 | 73.2 | 78.6 | 21.4 |
| No. 7. | - | - | 20.0 | 81.3 | 92.0 | 94.7 | 97.3 | 2.7 |
| No. 9. | - | - | 8.8 | 23.5 | 55.9 | 73.5 | 91.2 | 8.8 |
| No. 10. | - | 38.1 | 47.6 | 61.9 | 76.2 | 90.5 | 95.2 | 4.8 |
| No. 12. | - | - | - | - | - | - | - | 100.0 |
| No. 13. | - | - | - | - | - | 57.1 | 85.7 | 14.3 |
| No. 14. | - | - | 47.1 | 70.6 | 70.6 | 100.0 | 100.0 | - |
| No. 18. | - | - | 8.3 | 8.3 | 16.7 | 58.3 | 83.3 | 16.7 |
| No. 19. | - | - | - | - | - | - | - | 100.0 |
| Total. | - | 3.6 | 29.0 | 54.9 | 65.9 | 76.2 | 84.8 | 15.2 |

NOTE. — Data concerning rates were not available in Establishments Nos. 6, 8, 11, 15, 16, 17, 20, 21, 22, 23, 24.

TABLE 6. — *Hours of Labor and Average Weekly Earnings.*

| AVERAGE HOURS PER WEEK. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| Less than 30, | 2 | - | - | 1 | - | - | - | - | 3 |
| 30 and less than 34, | 3 | 1 | - | - | - | - | - | - | 4 |
| 34 and less than 38, | 2 | 12 | 1 | 1 | - | 1 | - | - | 17 |
| 38 and less than 42, | 4 | 5 | 11 | 6 | - | 5 | 1 | 1 | 33 |
| 42 and less than 46, | 1 | 8 | 21 | 17 | 10 | 8 | 7 | 4 | 76 |
| 46 and less than 50, | 2 | 4 | 16 | 21 | 22 | 12 | 9 | 15 | 101 |
| 50 and less than 54, | - | - | 3 | 11 | 13 | 8 | 9 | 3 | 47 |
| 54 and over, | - | - | - | 1 | - | - | - | - | 1 |
| Total. | 14 | 30 | 52 | 58 | 45 | 34 | 26 | 23 | 282 |

NOTE. — Data concerning hours were not available for 1,896 workers.

TABLE 7. — *Hours of Labor: by Establishments (Cumulative).*

| ESTABLISHMENTS. | PER CENT. OF WORKERS WORKING — | | | | | | | |
|-------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| | Less than 30 Hours. | Less than 34 Hours. | Less than 38 Hours. | Less than 42 Hours. | Less than 46 Hours. | Less than 50 Hours. | Less than 54 Hours. | 54 Hours and over. |
| No. 2, | 6.3 | 15.6 | 28.1 | 46.9 | 65.6 | 84.4 | 100.0 | - |
| No. 3, | .5 | 1.1 | 8.1 | 21.1 | 53.0 | 90.8 | 100.0 | - |
| No. 9, | - | - | - | 4.2 | 18.8 | 52.1 | 97.9 | 2.1 |
| No. 24, | - | - | - | 5.9 | 29.4 | 82.4 | 100.0 | - |
| Total, | 1.1 | 2.5 | 8.5 | 20.2 | 47.2 | 83.0 | 99.6 | .4 |

NOTE. — Data concerning hours were not available in 20 establishments.

TABLE 8. — *Fluctuation of Employment among 2,178 Workers: by Occupations.*

| OCCUPATIONS. | PER CENT. OF WORKERS EMPLOYED FOR SPECIFIED NUMBER OF MONTHS — | | | | | | | | | | | |
|-----------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Bench work, | 3.3 | 39.2 | 47.9 | 52.4 | 55.1 | 59.0 | 63.0 | 65.9 | 73.7 | 79.8 | 87.3 | 100 |
| Stripping, | 12.2 | 46.4 | 53.9 | 65.4 | 69.2 | 74.5 | 78.3 | 81.0 | 84.4 | 88.2 | 93.5 | 100 |
| Helping, | 5.7 | 17.0 | 21.7 | 24.3 | 27.8 | 33.9 | 39.6 | 44.8 | 56.5 | 66.5 | 74.3 | 100 |
| Closing and inspecting, | 5.8 | 29.2 | 37.2 | 41.6 | 46.0 | 50.4 | 54.0 | 57.7 | 66.4 | 73.0 | 81.8 | 100 |
| Machine covering, | 3.6 | 53.2 | 60.4 | 62.2 | 63.1 | 70.3 | 75.7 | 81.1 | 86.5 | 90.1 | 95.4 | 100 |
| Labeling, | 16.2 | 53.3 | 68.6 | 73.3 | 77.1 | 81.0 | 84.8 | 86.7 | 90.5 | 93.3 | 98.1 | 100 |
| Staying, | 7.4 | 43.2 | 51.9 | 56.8 | 60.5 | 65.4 | 67.9 | 72.8 | 82.7 | 86.4 | 92.6 | 100 |
| Gluing off, | 5.0 | 28.8 | 36.3 | 36.3 | 36.3 | 42.5 | 46.3 | 53.8 | 63.8 | 75.0 | 82.5 | 100 |
| Topping, | 20.3 | 53.6 | 63.8 | 66.7 | 71.0 | 73.9 | 75.4 | 76.8 | 78.3 | 84.1 | 88.4 | 100 |
| Hand folding, | 4.8 | 12.7 | 12.7 | 14.3 | 17.5 | 20.6 | 22.2 | 27.0 | 34.9 | 42.9 | 54.0 | 100 |
| Turning in, | 4.2 | 37.5 | 37.5 | 45.8 | 50.0 | 50.0 | 50.0 | 54.2 | 62.5 | 75.0 | 100.0 | 100 |
| Lacing, | - | 30.8 | 46.2 | 46.2 | 61.5 | 76.9 | 76.9 | 76.9 | 76.9 | 76.9 | 92.3 | 100 |
| Miscellaneous, | 7.5 | 34.7 | 44.9 | 49.7 | 52.7 | 56.9 | 58.1 | 63.8 | 70.4 | 76.6 | 84.7 | 100 |
| Total, | 6.8 | 37.2 | 46.1 | 50.2 | 58.4 | 66.0 | 61.5 | 65.4 | 72.5 | 76.7 | 86.1 | 100 |

TABLE 9. — *Fluctuation of Employment among 2,178 Workers; by Establishments.*

| ESTABLISHMENTS. | PER CENT. OF WORKERS EMPLOYED FOR SPECIFIED NUMBER OF MONTHS — | | | | | | | | | | | |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| No. 1. | 1.5 | 52.6 | 63.2 | 69.9 | 73.1 | 76.6 | 81.3 | 83.9 | 88.9 | 91.5 | 95.6 | 100 |
| No. 2. | 6.4 | 18.4 | 20.2 | 22.9 | 25.5 | 28.7 | 31.9 | 36.7 | 48.4 | 56.9 | 71.8 | 100 |
| No. 3. | — | 29.7 | 34.6 | 37.3 | 41.6 | 44.9 | 49.4 | 48.6 | 58.4 | 64.3 | 76.8 | 100 |
| No. 4. | 7.1 | 33.3 | 45.4 | 48.1 | 51.9 | 60.7 | 65.6 | 69.9 | 74.9 | 80.3 | 87.4 | 100 |
| No. 5. | 7.5 | 61.6 | 64.4 | 69.9 | 74.0 | 77.4 | 79.5 | 81.5 | 84.9 | 87.7 | 90.4 | 100 |
| No. 6. | — | 32.1 | 40.0 | 42.1 | 45.0 | 55.0 | 61.4 | 64.3 | 76.4 | 80.0 | 87.1 | 100 |
| No. 7. | 13.3 | 36.2 | 43.2 | 49.4 | 51.6 | 54.7 | 58.6 | 65.0 | 74.2 | 78.1 | 83.6 | 100 |
| No. 8. | 10.3 | 30.2 | 34.1 | 37.3 | 39.7 | 46.8 | 50.0 | 57.1 | 68.3 | 74.6 | 81.7 | 100 |
| No. 9. | 7.1 | 41.8 | 53.1 | 56.1 | 57.1 | 59.2 | 61.2 | 64.3 | 71.4 | 84.7 | 89.8 | 100 |
| No. 10. | 1.2 | 20.9 | 25.6 | 26.7 | 27.9 | 30.2 | 34.9 | 37.2 | 45.3 | 60.5 | 70.9 | 100 |
| No. 11. | 1.2 | 26.7 | 41.9 | 43.0 | 46.5 | 48.5 | 51.2 | 55.8 | 62.8 | 75.6 | 83.6 | 100 |
| No. 12. | 27.9 | 44.1 | 52.9 | 61.8 | 64.7 | 69.1 | 73.0 | 77.9 | 77.9 | 80.9 | 89.7 | 100 |
| No. 13. | 32.8 | 60.7 | 62.3 | 67.2 | 67.2 | 69.1 | 75.0 | 77.9 | 82.0 | 86.9 | 91.8 | 100 |
| No. 14. | — | 17.0 | 27.7 | 31.9 | 36.2 | 48.9 | 53.2 | 57.4 | 70.2 | 85.1 | 87.2 | 100 |
| No. 15. | — | 2.2 | 10.9 | 17.4 | 21.7 | 23.9 | 23.9 | 34.8 | 43.5 | 50.0 | 65.2 | 100 |
| No. 16. | — | 40.5 | 70.3 | 73.0 | 78.4 | 78.4 | 81.1 | 83.8 | 83.8 | 86.5 | 87.3 | 100 |
| No. 17. | 11.1 | 61.1 | 83.3 | 86.1 | 88.9 | 94.4 | 97.2 | 97.2 | 100.0 | 100.0 | 100.0 | 100 |
| No. 18. | 15.2 | 48.5 | 54.5 | 60.6 | 60.6 | 60.6 | 63.6 | 69.7 | 84.8 | 90.9 | 97.0 | 100 |
| No. 19. | 7.1 | 46.4 | 60.7 | 60.7 | 60.7 | 77.8 | 78.6 | 85.7 | 88.3 | 89.3 | 96.4 | 100 |
| No. 20. | 37.0 | 59.3 | 63.0 | 66.7 | 74.1 | 77.8 | 81.5 | 81.5 | 88.9 | 92.6 | 96.3 | 100 |
| No. 21. | — | 14.8 | 63.0 | 70.4 | 81.5 | 81.5 | 81.5 | 88.9 | 88.9 | 94.6 | 96.3 | 100 |
| No. 22. | — | 26.9 | 38.5 | 42.3 | 42.3 | 42.3 | 57.7 | 61.5 | 73.1 | 84.6 | 96.2 | 100 |
| No. 23. | — | 58.8 | 64.7 | 76.5 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 94.1 | 100.0 | 100 |
| No. 24. | 17.6 | 35.3 | 41.2 | 47.1 | 53.9 | 58.8 | 58.8 | 58.8 | 64.7 | 82.4 | 88.2 | 100 |
| Total, | 6.8 | 37.2 | 46.1 | 50.2 | 53.4 | 58.0 | 61.5 | 65.4 | 72.5 | 78.7 | 86.1 | 100 |

DIAGRAM 1.
Curve Showing Per Cent. of Employment for 2,178 Paper-box Workers during 52 Weeks.

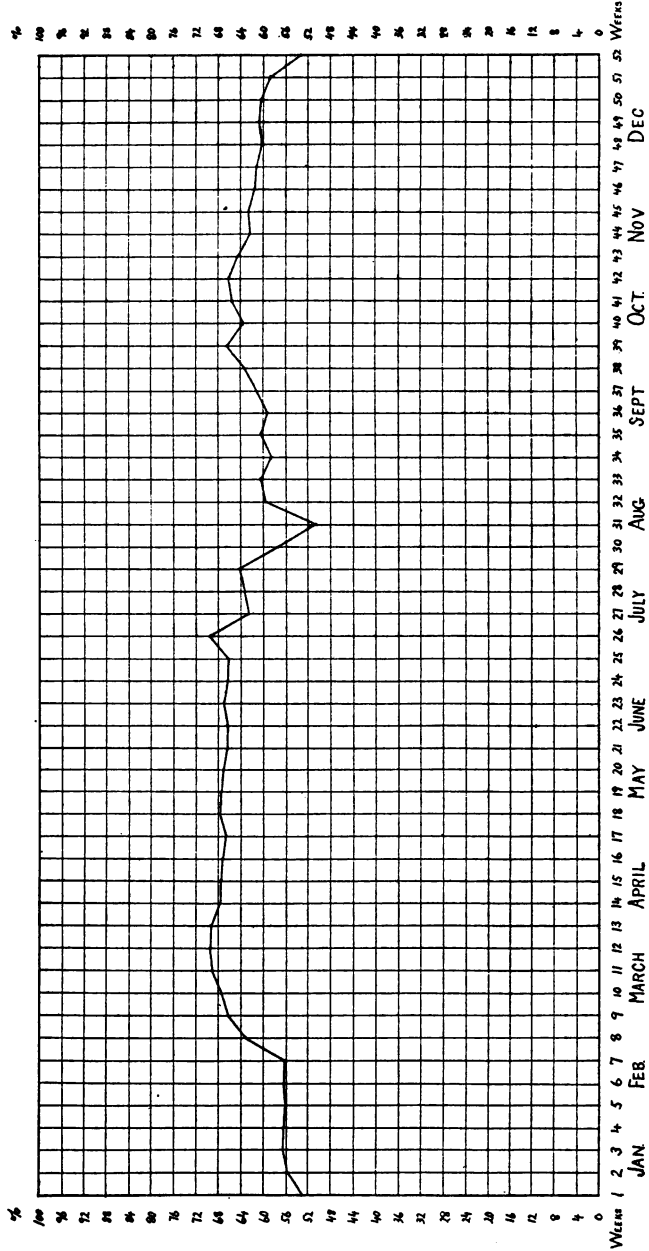


TABLE 10 (a). — *Average Weekly Earnings: by Age Groups.*

| AGE. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|----------------------|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| 14 and less than 16, | 4 | 12 | 2 | 2 | - | - | - | - | 20 |
| 16 and less than 18, | 3 | 22 | 42 | 28 | 14 | 10 | 2 | - | 121 |
| 18 and less than 21, | 1 | 11 | 25 | 43 | 65 | 55 | 22 | 13 | 235 |
| 21 and less than 25, | 2 | - | 13 | 18 | 50 | 48 | 41 | 44 | 216 |
| 25 and less than 30, | 1 | 1 | 6 | 9 | 12 | 23 | 24 | 36 | 112 |
| 30 and less than 35, | - | - | 1 | 1 | 8 | 16 | 9 | 36 | 71 |
| 35 and less than 40, | - | - | 3 | 4 | 6 | 10 | 7 | 21 | 51 |
| 40 and less than 45, | - | - | 1 | - | 2 | 9 | 5 | 9 | 26 |
| 45 and less than 50, | - | - | 1 | 2 | 2 | - | 2 | 8 | 15 |
| 50 and less than 55, | - | - | - | - | 3 | 2 | 1 | 3 | 9 |
| 55 and less than 60, | - | - | - | 1 | 1 | - | - | 2 | 4 |
| 60 and over, | - | 1 | - | - | 1 | - | 2 | 2 | 6 |
| Total, | 11 | 47 | 94 | 106 | 164 | 173 | 115 | 174 | 896 |

NOTE. — Data for age were not available for 1,292 workers.

TABLE 10 (b). — *Average Weekly Earnings: by Age Groups (Cumulative).*

| AGE. | NUMBER OF WORKERS EARNING — | | | | | | | |
|----------------------|-----------------------------|------------|------------|------------|------------|------------|------------|---------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| 14 and less than 16, | 4 | 16 | 18 | 20 | 20 | 20 | 20 | - |
| 16 and less than 18, | 3 | 25 | 67 | 95 | 109 | 119 | 121 | - |
| 18 and less than 21, | 1 | 12 | 37 | 80 | 145 | 200 | 222 | 13 |
| 21 and less than 25, | 2 | 2 | 15 | 33 | 83 | 131 | 172 | 44 |
| 25 and less than 30, | 1 | 2 | 8 | 17 | 29 | 52 | 76 | 36 |
| 30 and less than 35, | - | - | 1 | 2 | 10 | 26 | 35 | 36 |
| 35 and less than 40, | - | - | 3 | 7 | 13 | 23 | 30 | 21 |
| 40 and less than 45, | - | - | 1 | 1 | 3 | 12 | 17 | 9 |
| 45 and less than 50, | - | - | 1 | 3 | 5 | 5 | 7 | 8 |
| 50 and less than 55, | - | - | - | - | 3 | 5 | 6 | 3 |
| 55 and less than 60, | - | - | - | 1 | 2 | 2 | 2 | 2 |
| 60 and over, | - | 1 | 1 | 1 | 2 | 2 | 4 | 2 |
| Total, | 11 | 58 | 152 | 260 | 424 | 597 | 712 | 174 |

NOTE. — Data for age were not available for 1,292 workers.

TABLE 11. — *Average Weekly Earnings: by Years of Experience.*

| YEARS OF EXPERIENCE. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|--------------------------------|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| Less than 1, | 9 | 19 | 28 | 16 | 10 | 2 | 1 | — | 85 |
| 1 and less than 2, | 1 | 13 | 18 | 20 | 18 | 7 | 1 | 3 | 81 |
| 2 and less than 3, | — | 8 | 20 | 23 | 23 | 21 | 7 | 2 | 104 |
| 3 and less than 4, | — | 2 | 6 | 21 | 33 | 28 | 7 | 8 | 105 |
| 4 and less than 5, | — | 2 | 6 | 10 | 19 | 28 | 14 | 8 | 87 |
| 5 and less than 6, | — | — | 3 | 2 | 12 | 16 | 12 | 12 | 57 |
| 6 and less than 7, | — | — | — | 4 | 7 | 8 | 6 | 15 | 40 |
| 7 and less than 8, | — | — | — | — | 6 | 5 | 10 | 13 | 34 |
| 8 and less than 9, | — | — | — | 3 | 9 | 8 | 10 | 12 | 42 |
| 9 and less than 10, | 1 | — | — | 2 | — | 6 | 7 | 4 | 20 |
| 10 and less than 11, | — | — | — | — | 3 | 9 | 6 | 9 | 27 |
| 11 and less than 12, | — | — | — | — | 2 | — | 1 | 6 | 9 |
| 12 and less than 13, | — | — | — | — | 2 | 4 | 4 | 12 | 22 |
| 13 and less than 14, | — | — | — | — | 1 | — | — | 3 | 4 |
| 14 and less than 15, | — | — | — | — | 1 | 2 | 1 | 9 | 13 |
| 15 and over, | — | 1 | 1 | 1 | 10 | 16 | 12 | 48 | 89 |
| Total, | 11 | 45 | 82 | 102 | 156 | 160 | 99 | 164 | 819 |

NOTE. — Data concerning years of experience were not available for 1,359 workers.

TABLE 12. — *Home Conditions and Average Weekly Earnings (Cumulative).*

| HOME CONDITIONS. | NUMBER OF WORKERS EARNING — | | | | | | | |
|----------------------------------|-----------------------------|------------|------------|------------|------------|------------|------------|---------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| Living at home, | 10 | 55 | 141 | 236 | 372 | 517 | 611 | 140 |
| Living away from home, | 1 | 2 | 10 | 25 | 56 | 81 | 102 | 40 |
| Total, | 11 | 57 | 151 | 261 | 428 | 598 | 713 | 180 |

NOTE. — Data concerning home conditions were not available for 1,285 workers.

TABLE 13. — *Home Conditions for 866 Employees: by Age Groups.*

| AGE. | NUMBER AND PER CENT. OF WORKERS — | | | | TOTAL. | |
|----------------------------|-----------------------------------|-------------|------------------------|-------------|------------|------------|
| | LIVING AT HOME. | | LIVING AWAY FROM HOME. | | | |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. |
| 14 and less than 16, . . . | 19 | 95.0 | 1 | 5.0 | 20 | 100 |
| 16 and less than 18, . . . | 119 | 98.3 | 2 | 1.7 | 121 | 100 |
| 18 and less than 21, . . . | 212 | 90.9 | 21 | 9.1 | 233 | 100 |
| 21 and less than 25, . . . | 175 | 82.9 | 36 | 17.1 | 211 | 100 |
| 25 and less than 30, . . . | 82 | 73.9 | 29 | 26.1 | 111 | 100 |
| 30 and less than 35, . . . | 54 | 78.3 | 15 | 21.7 | 69 | 100 |
| 35 and less than 40, . . . | 32 | 71.1 | 13 | 28.9 | 45 | 100 |
| 40 and less than 45, . . . | 19 | 79.2 | 5 | 20.8 | 24 | 100 |
| 45 and less than 50, . . . | 8 | 57.1 | 6 | 42.9 | 14 | 100 |
| 50 and less than 55, . . . | 3 | 33.3 | 6 | 66.7 | 9 | 100 |
| 55 and less than 60, . . . | 1 | 25.0 | 3 | 75.0 | 4 | 100 |
| 60 and over, . . . | 3 | 60.0 | 2 | 40.0 | 5 | 100 |
| Total, . . . | 727 | 83.9 | 139 | 16.1 | 866 | 100 |

NOTE. — Data for age were not available for 1,312 workers, and of the 886 workers whose ages were given, 20 gave no record of home conditions.

WAGES OF WOMEN IN WOMEN'S CLOTHING FACTORIES IN MASSACHUSETTS.

STATISTICS OF MANUFACTURE.

The manufacture of women's clothing on a large scale in this country did not begin until the latter half of the nineteenth century, and followed the introduction of the sewing machine into the clothing industries.

The manufacture of cloaks and mantillas as a wholesale business was said to have begun between 1848 and 1858. As an important industry, however, the manufacture of women's clothing, principally cloaks, began early in the sixties about the time that the Civil War, through the Government demand for clothing for soldiers and sailors, was giving another great impetus to the men's ready-made-clothing industry. The manufacture of women's suits was not begun, however, until early in the eighties. . . .¹

¹ Senate Document 645, *Woman and Child Wage Earners*, Vol. IX., p. 142.

The rapid development which has taken place during the last half-century is shown in the following tables, and is ascribed to the gradual transfer of work on women's clothing from the homes and custom dressmaking establishments to the factories.

Manufacture of Women's Clothing,¹ United States, 1859-1909.²

| YEAR. | Number of Establishments. | Wage Earners (Average Number). | Wages. | Cost of Materials. | Value of Product. | Value added by Manufacture. |
|---------------|---------------------------|--------------------------------|--------------|--------------------|-------------------|-----------------------------|
| 1909, | 4,558 | 153,743 | \$78,568,261 | \$208,788,226 | \$384,751,649 | \$175,963,423 |
| 1904, | 3,351 | 115,705 | 51,180,193 | 130,719,996 | 247,661,560 | 116,941,564 |
| 1899, | 2,701 | 83,739 | 32,586,101 | 84,704,592 | 159,339,539 | 74,634,947 |
| 1889, | 1,224 | 39,149 | 15,428,272 | 34,277,219 | 68,164,019 | 33,886,800 |
| 1879, | 562 | 25,192 | 6,661,005 | 19,559,227 | 32,004,794 | 12,445,567 |
| 1869, | 1,847 | 11,696 | 2,513,956 | 6,837,978 | 12,900,583 | 6,062,605 |
| 1859, | 188 | 5,739 | 1,193,032 | 3,323,335 | 7,181,039 | 3,857,704 |

¹ "The manufacture for the wholesale trade of a great variety of clothing for women, girls and children is covered by this classification, which includes the manufacture, not only of complete suits, but also of dresses, skirts, petticoats, kimonoes, dressing sacques, wrappers, jackets, cloaks, capes, underwear, infants' clothing, shirt waists, linings, dress stays, belts, dress shields and similar articles. There is considerable duplication in the total value of products reported." — United States thirteenth census, Vol. VIII., p. 398.

² United States thirteenth census, Vol. VIII., p. 399.

Increase in Value of Product, Women's Clothing¹ (1859-1909).

| YEAR. | Value of Product. | Amount of Increase. | Per Cent. of Increase. |
|-----------------|-------------------|---------------------|------------------------|
| 1909, | \$384,751,649 | \$225,412,110 | 141.5 |
| 1899, | 159,339,539 | 91,175,520 | 133.8 |
| 1889, | 68,164,019 | 36,159,225 | 112.9 |
| 1879, | 32,004,794 | 19,104,211 | 148.1 |
| 1869, | 12,900,583 | 5,719,544 | 79.6 |
| 1859, | 7,181,039 | - | - |

¹ Computed from Table 87, United States thirteenth census, Vol. VIII., p. 399.

The most important States in the manufacture of women's clothing, graded according to the value of their product, are New York, Pennsylvania, Ohio, Illinois and Massachusetts.

The following tables show the manufacture of women's clothing by States and a comparison of Massachusetts and the country as a whole: —

Manufacture of Women's Clothing by States.¹

| STATE. | Number of Establishments. | Number in Industry. | Capital. | Value of Product. |
|--|---------------------------|---------------------|------------|-------------------|
| California, | 64 | 1,197 | \$642,890 | \$1,672,313 |
| Connecticut, | 17 | 1,473 | 677,073 | 1,715,700 |
| Georgia, | 4 | 145 | 71,052 | 152,225 |
| Illinois, | 221 | 7,279 | 5,567,194 | 16,635,236 |
| Indiana, | 18 | 1,403 | 851,363 | 2,057,635 |
| Iowa, | 19 | 985 | 1,097,691 | 1,535,382 |
| Kentucky, | 15 | 475 | 272,622 | 772,082 |
| Louisiana, | 5 | 129 | 99,944 | 117,608 |
| Maine, | 7 | 574 | 388,201 | 686,329 |
| Maryland, | 72 | 3,030 | 1,694,363 | 4,351,263 |
| Massachusetts, | 174 | 6,686 | 4,222,853 | 11,727,980 |
| Michigan, | 52 | 2,521 | 1,889,520 | 3,586,856 |
| Minnesota, | 11 | 233 | 108,337 | 304,871 |
| Missouri, | 68 | 3,122 | 2,383,665 | 5,439,053 |
| Nebraska, | 6 | 91 | 88,703 | 159,632 |
| New Hampshire, | 8 | 273 | 364,518 | 395,764 |
| New Jersey, | 99 | 4,691 | 2,881,952 | 5,927,091 |
| New York, | 3,083 | 114,925 | 84,213,014 | 272,517,792 |
| Ohio, | 153 | 10,191 | 8,150,889 | 19,493,060 |
| Pennsylvania, | 401 | 18,080 | 12,254,847 | 32,837,424 |
| Vermont, | 6 | 375 | 317,891 | 502,643 |
| Virginia, | 3 | 52 | 46,846 | 61,052 |
| Washington, | 6 | 77 | 80,989 | 167,658 |
| Wisconsin, | 19 | 635 | 405,684 | 927,932 |
| All other States, ² | 27 | 379 | 528,956 | 1,007,068 |

¹ United States thirteenth census, Vol. VIII., pp. 682, 683.

² All other States embrace: Colorado, 2 establishments; Idaho, 1; Kansas, 2; North Carolina, 2; Oklahoma, 1; Oregon, 2; Rhode Island, 4; South Carolina, 1; Tennessee, 3; Texas, 2; and West Virginia, 7.

Statistics of Manufacture (Women's Clothing).

| | CENSUS RETURNS ¹ FOR 1909. | | Statistics of Manufactures for 1913, Massachusetts. |
|--|--|----------------|---|
| | United States. | Massachusetts. | |
| 1. Number of establishments, | 4,558 | 174 | 184 |
| 2. Capital, | \$129,301,057 | \$4,222,853 | \$5,063,449 |
| 3. Value of products, | \$384,751,649 | \$11,727,980 | \$13,812,249 |
| 4. Value added by manufacture (product less cost of material), | \$175,963,423 | \$5,216,648 | \$6,520,872 |
| 5. Cost of materials used, including fuel and rent of power, | \$208,788,226 | \$6,511,332 | \$7,291,377 |
| 6. Expense (rent, tax, contract, other), | \$33,715,001 | \$746,996 | - ² |
| 7. Salaries, | \$20,417,768 | \$657,881 | - ² |
| 8. Wages, | \$78,568,261 | \$2,446,277 | \$3,062,218 |
| 9. Total cost, | \$341,489,256 | \$10,362,486 | - ² |
| 10. Value of product less total cost, | \$43,262,393 | \$1,365,494 | - ² |
| 11. Employees:— | | | |
| Number of salaried officials and clerks, | 18,796 | 663 | - ² |
| Average number of wage earners employed during the year, | 153,743 | 5,813 | 6,052 |
| Male, 16 years of age and over, December 15, | 58,316 | 1,299 | 1,385 ³ |
| Female, 16 years of age and over, December 15, | 103,063 | 4,662 | 4,043 ³ |
| Female, under 16 years of age, December 15, | 1,307 | 47 | 321 ⁴ |

¹ United States thirteenth census, Vol. VIII., pp. 518-521, 682, 683.

² Not taken by the Massachusetts Bureau of Statistics.

³ This is the number of employees eighteen years of age and over, December 13.

⁴ This is the number of employees under eighteen years of age, December 13.

The following table, which shows the growth of the women's clothing industry in Massachusetts during the last five years for which figures are given by the Bureau of Statistics, shows also the numbers employed in the industry in the same period. During that time the numbers of both men and women employees have increased, until in 1913 Massachusetts had an average number of 4,627 women employed in making women's clothing. The following sections of the present study are devoted to an analysis of the work and wages of that part of this working force which is engaged in the manufacture of cloaks, suits, skirts, dresses, including house dresses, waists and kimonos.

*Manufacture of Women's Clothing in Massachusetts, 1909-13.*¹

| YEAR. | Estab-lish-ments. | Capital invested. | Value of Stock and Materials used. | Amount of Wages paid during the Year. | Average Yearly Earnings. | WAGE EARNERS EMPLOYED. | | | | | Value of Product. |
|-------|-------------------|-------------------|------------------------------------|---------------------------------------|--------------------------|------------------------|----------|-------------|------------------|------------------|-------------------|
| | | | | | | AVERAGE NUMBER. | | | Smallest Number. | Greatest Number. | |
| | | | | | | Males. | Females. | Both Sexes. | | | |
| 1909, | 174 | \$4,222,853 | \$6,511,332 | \$2,446,277 | -- | -- | 5,813 | 5,200 | 6,212 | \$11,797,990 | |
| 1910, | 143 | 4,055,709 | 6,652,565 | 2,598,509 | \$456 09 | 1,369 | 4,302 | 5,671 | 4,223 | 7,041 | 11,714,278 |
| 1911, | 159 | 4,184,305 | 6,194,776 | 2,673,037 | 469 61 | 1,397 | 4,295 | 5,692 | 4,113 | 7,014 | 11,745,884 |
| 1912, | 173 | 4,590,960 | 6,646,478 | 2,723,984 | 480 08 | 1,382 | 4,292 | 5,674 | 4,259 | 6,899 | 12,543,548 |
| 1913, | 184 | 5,082,449 | 7,291,377 | 3,062,218 | 505 98 | 1,425 | 4,627 | 6,052 | 4,196 | 7,394 | 13,812,249 |

¹ No figures given.

¹ Massachusetts Statistics of Manufactures, 1909-13.

METHOD AND SCOPE OF THE INQUIRY.

The study of women's clothing by this Commission was made in the months of May, June, July and August. It is concerned with 36 establishments, situated in 7 cities and towns of the State. In these women's clothing factories a transcript of the pay-roll records for each female employee was taken for a period covering the fifty-two weeks preceding the date of the initiation of the investigation. This record in the case of 16 factories included the record of the number of hours worked each week. In as many cases as possible schedules were also filled out by the women workers themselves, in order that the Commission might have available such information as age, marital condition, living arrangements and length of experience. In addition, an inspection of the premises was made for the purpose of studying the occupations. The results of the analysis of the schedule material will be found in the section entitled "Analysis of the Wage Situation."

In accordance with the duties of the Commission as prescribed by the statute, the inquiry has been limited to ascertaining wages and rates for the various occupations, with such other matters as are most intimately connected with that subject. This procedure necessitated the omission of many subjects which might have proved both interesting and valuable as matters of public knowledge in connection with the wage situation. For example, the matters of overtime, sanitation, accidents and more detailed information as to the living arrangements and expenses of the women employees have a definite bearing on the matter of wages in any given employment. Moreover, these matters are under the jurisdiction of other boards and commissions in this State, and certain information concerning them appears from those sources from time to time. Consequently, the material gathered by the Commission is limited in scope and comprises only the data which in the experience of the Commission have proved to be most pertinent and useful in the attempt to improve the wage situation.

THE PROCESS OF MANUFACTURE.

The women's clothing industry in its transfer from the home and small custom shops to the factory has retained the processes of manufacture characteristic of the earlier stages of the business, differing only in the degree of specialization and in the use of power and more elaborate machine devices incident to the larger scale of production. The main processes of cutting, machine stitching, hand finishing and pressing are essentially the same, except whereas in the home the garment is entirely manufactured by one individual, in the factory it passes through the hands of a number of different operators, each performing one specialized task or group of allied tasks. As in the waist and dress shops we have a more highly organized and specialized replica of the work of the home dressmaker, so in the factories making cloaks, suits and skirts is reproduced on a large scale the activities of the custom tailor shop.

Dress and Waist Manufacture.

Designing. — The first step in the making of a ready-made garment is the designing of the model. From this model samples are made for demonstration to the retail trade. Owing to the rapid changes in the fashions, and the great competition in the business, a firm must produce a large number of models in order to secure enough orders to keep in existence. Most firms, therefore, employ at least one high-grade designer, and sometimes more during the busy season. In the shirtwaist houses women designers are usually employed. Their work consists in drawing designs for new garments in accordance with the latest ideas in foreign styles adapted to the needs of their market, and in draping models on the form until the desired effect is secured. When a designer is employed all the year around, she usually also takes some part in the management of the workrooms and the supervision of employees. Some designers work only at their special trade, sometimes going from firm to firm in accordance with the seasonal demands.

Sample Making. — The designer having prepared the model, a pattern is taken from it, according to which a number of sample garments are cut out. They are then given to a skilled machine operator, who during the season of designing specializes in this line of work, and is known as a sample maker. A single sample maker does all the stitching necessary to the garment. Special care is given in the preparation of samples, and higher rates are paid to machine operators while engaged in this work.

Cutting. — After orders have been taken from a sample, cardboard patterns are cut from it for the various stock sizes. The material out of which the garments are to be made is then laid out in layers on a long table, and the various sections of the pattern placed upon it in such a way as to utilize all the goods possible. The material is then cut out with shears, knife or cutting machine, according to the number of layers, which in turn depends upon the texture of the goods and the size of the order. In the case of cheap cotton house dresses and shirtwaists the layers of material are piled up so that a large number of garments may be cut out at a time. The work of cutting is entirely in the hands of men, except in establishments making certain lines of high-grade garments, where only one or at most a few garments need be cut out at once, and shears may be used in the operation. When goods are tucked they are returned to the cutting department to be shaped to the size of the pattern before the garment is seamed. This work is sometimes known as "sloping." Although this is usually a man's work, women are sometimes employed as slopers.

Assorting and Preparing. — After the garments have been cut out they are distributed to the machine operators by the forewoman. In highly organized factories, where there is a large output, girls known as assorters and preparers are employed who arrange in bundles the various parts of the garments as they come from the cutters, and add to each bundle all necessary trimmings and findings. In small establishments cutters or forewomen prepare the work.

Machine Operating. — The organization of the process of machine operating or stitching differs greatly with the kind

and quality of the garment manufactured, and also to a less degree with the policy of the individual shop. Where the cheaper grade of house dresses and shirtwaists are manufactured there is usually much section work, each worker performing only one specific machine operation upon each of the lot of garments. Thus not only are skirts and waists stitched by different operators, but workers who stitch special seams, such as setting the sleeves into the armholes, attaching the collar to the waist, and joining the waist and skirt are also found. On the various grades of garments special tuckers, shirrers, hemstitchers, lace runners, button-setters and buttonhole makers are also used. As different grades of skill are required to perform these various operations it is possible to use a larger amount of apprentice labor than where the entire garment is stitched by one individual. In the manufacture of silk waists and dresses there is usually much less subdivision, one operator stitching all the seams of the waist body and sleeves, while another does the necessary hemstitching.

In spite of the extensive subdivision of machine operation in many establishments it has not been found possible, except sometimes in the case of buttonhole and button machine operators and tuckers and lace trimmers, to get information as to the specific task of each person classed as machine operator. Even workers experienced in operations requiring a high grade of skill are moved about from one task to another according to the work required on each special order, and in the case of those engaged in the simpler operations there is even more shifting. For this reason it has been necessary in this study to group together under a single head all machine operators, irrespective of whether they are section workers or make a complete garment.

Machine operating in the dress and waist shops is almost entirely in the hands of women. All machines are run by electric power, and there is little unavoidable physical strain upon the workers. Piece rates are usually paid in this occupation, and in the busy season, when the shops are run at full capacity and every machine is in action, the long hours of work at high speed tend to be somewhat nervously exhausting.

Draping. — In the manufacture of ready-made dresses, after the waist and skirt are stitched, they must be adjusted at the waist line and joined together. This work, which corresponds to the fitting of a custom-made dress, is prepared for stitching by the draper, a skilled woman worker who places the garment on a figure of the desired stock size, adjusts the pleats and gathers and pins the skirt and waist together. The stitching is then done on the machine by a special operator known as a joiner. Where cheap cotton house dresses are produced the work of the draper consists only of the simplest adjustment described above, and indeed some of the cheapest garments are not fitted on the figure at all, the folds being adjusted and the skirt and waist joined by experienced stitchers without draping. In the manufacture of high-grade costumes, however, especially where there is much hand sewing, the work of the draper is exceedingly important, and experienced dressmakers are employed at the task. They not only fit the garment to the form and adjust the belt line, but also hang the skirt, drape the folds of the waist and pin on the girdle and trimmings. Garments of this sort usually go direct from the draper to the finisher, who completes the process of manufacture by sewing by hand the adjustments planned by the draper.

Finishing. — A certain amount of hand sewing is required in the making of many shirtwaists and dresses, even of the cheapest grade. The amount of skill required in the occupation of finishing, as the work is called, varies greatly with the nature of the product. In the manufacture of cheap machine garments finishing consists only in such work as sewing on hooks and eyes and fancy buttons. On the other hand, in the manufacture of high-class silk and wool dresses it is usually necessary to employ more experienced workers, persons who have had a general dressmaker's training, to sew on the girdles and trimmings, attach lace yokes, and in general complete the work prepared by the draper's pins. Garments of chiffon, lace and other soft materials are almost entirely made by hand by skilled finishers.

There is little or no work for the finisher in the making of the simple cotton or silk shirtwaists, unless fancy buttons and

other trimming which cannot be sewn on by machine are used.

Cleaning. — When the machine processes are completed on a garment it is handed over to a young girl who cuts off the thread ends. This work, which is known as cleaning, is one of the most unskilled in the industry. In some factories cleaning is done by the examiners; in others, cleaners are classed as finishers; therefore it is not possible to designate in this study all the workers engaged in this special task.

Examining. — After the garment is completed it goes to the examiner, who inspects it carefully for any errors in stitching, repairs by hand all slight defects, and, in the case of the higher grade garments, ascertains by measurement and adjustment to the form that the garment accords with the plan and dimensions of the model. In some establishments certain workers classed as examiners are little more than cleaners, while in others, where the product is of a higher grade, skilled examiners are necessary to insure the successful turning out of an order.

Pressing. — Garments which have become rumped in the process of manufacture, and which depend for their sale in the retail market upon their attractiveness and “ready-to-wear” appearance, are pressed before shipment from the factory. Except where garments are made of serges and other heavy goods pressers are usually women. Their work is not heavy, as cotton and light silk goods are readily pressed out with a light iron.

Folding. — Delicate shirtwaists of medium and higher grades are frequently shipped in individual boxes in order to appear fresher and more attractive to the eye of the retail purchaser. House dresses are usually folded and bundled into packages of four or six garments. Special workers are often employed whose work consists in folding and packing such goods.

Cloak, Suit and Skirt Manufacture.

As the manufacture of waists and dresses is mainly a woman's industry, so the cloak, suit and skirt factories, like the custom tailor shops, employ mostly men. In some es-

tablishments women operators stitch the skirts, especially those of light weight materials, but in general, machine operating, as well as designing, cutting and pressing, is in the hands of men.

The only occupation in which women are mainly employed is that of finishing. Skirt finishers baste hems, attach hooks, eyes and buttons, cut off thread ends and do all other hand sewing necessary to the finish of the belt and placket. There are two grades of coat finishers, — those who baste and fell the linings, and the less skilled group who perform such work as sewing on buttons and cleaning.

METHOD OF TREATING WAGE MATERIAL.

In the preparation of the material for tabulation all records of persons who appeared on the pay roll for less than four weeks out of the fifty-two under consideration were thrown out. This was done in order that the conclusions reached might apply only to workers who could legitimately be considered a part of the normal working force of the industry.

In computing weekly earnings and hours worked each week for individual workers, the procedure for each individual was as follows: the sum of all payments made during the fifty-two-week period, — that is, the girl's total income from her work for the year, — was found. This sum was divided by the number of weeks during which she was actually at work, as indicated by the number of weekly payments made to her. When the weekly payment was for a paid vacation the vacation week was counted as a week actually worked. In this way her average weekly earnings for the time she was at work in the occupation under consideration were ascertained. A corresponding procedure was adopted in treating hours of work. The number of hours worked during the fifty-two-week period was totaled, and this sum divided by the number of weeks actually at work, as indicated by the number of weekly payments made. The amounts paid were not always the equivalent of a full week's work. The factory or department may have been running on short time, girls may have entered or left the factory in the middle of a week, or absences may have occurred because of illness or other indi-

vidual reasons. This necessitates a slight misrepresentation in the analysis of earnings, which could be avoided only where a record of hours was kept in the factory, and even then it was not possible to ascertain to which of the above causes the short time should be ascribed. The Commission has made it a rule to follow the written record, and has attempted to present the pay-roll figures as found, without omissions or additions due to interpretations of its own.

ANALYSIS OF THE WAGE SITUATION.

Table 1, (a) and (b), in which the weekly earnings of women in clothing factories are classified according to the occupations in which they were engaged, shows that one-half (50.1 per cent.) earned less than \$6 a week, and that more than three-fourths (78.1 per cent.) earned less than \$8 a week. The lowest paid occupations, judged by the percentage who earned less than \$6 a week, are dress and waist finishing and pressing. The highest paid, according to the percentage who earned less than \$6 a week, are sample making and draping. No sample maker earned less than \$7 a week, in contrast with the fact that more than three-fourths of the dress and waist finishers and pressers earned less than \$7 a week. The significant points of Table 1 are, therefore, the low wages shown to be paid in the industry as a whole, and the wide differences in earnings according to the occupations involved.

The weekly rates at which the workers were scheduled to be paid are shown in Table 2. Piece workers, who make up an important group in this industry, are necessarily excluded from this table, as well as all time workers whose rates were not available, so that the table shows rates for only 942 of the 1,961 women whose actual earnings are shown in Table 1. In common with the table of earnings, this table shows a wide difference between different occupations with regard to their rates of payment. Machine operating, dress and waist finishing, and examining show the lowest rates, judged by the percentage scheduled for less than \$6, and sample making and draping the highest. Only 27.3 per cent. of the workers were on rates of less than \$6 a week, as against 50.1 per cent.

who actually received an average per week of less than that amount. A comparison between the other items in this table and those in Table 1 shows a very general failure among the workers studied in this industry to make full wages. This failure may be ascribed to various causes, among which are compulsory short time, particularly during the slack season in the industry, illness and the preference of the employee. Actual records do not exist, however, to show to what cause any particular worker's failure to make full wages may be ascribed.

In Table 3 the 1,961 workers studied are classified according to the total amount earned during the past year in the factory in which they were working at the time the study was made. Nearly one-half (47.7 per cent.) earned less than \$100 in the course of the year, and only 174 (8.9 per cent.) out of the total number earned as much as \$400 a year. These earnings are manifestly lower than those which the weekly earnings described in Table 1 would yield by the year. Their low level may be due in large part to unemployment proper, that is, inability to get work especially during the slack season, or it may be due to changing from factory to factory, leaving the factory to marry, or to illness or other miscellaneous reasons.

In Table 4 the establishments manufacturing dresses and waists and the establishments manufacturing cloaks, suits and skirts are grouped separately, and a comparison is afforded of the two groups as well as of the various establishments. The dress and waist firms pay lower wages, as shown by the fact that 52.2 per cent. of the workers in those establishments earned less than \$6 a week, as against 37 per cent. of the cloak, suit and skirt workers who earned less than that amount. The cloak, suit and skirt work is in general more skilled, and the wages are doubtless also influenced by the greater degree of organization among the employees. Among the dress and waist firms there is a variation from an establishment which paid 87.7 per cent. of its workers less than \$6 a week to one in which only 12.9 per cent. of the women employees earned less than that amount. These variations depend in part upon the location

(whether in large or small cities), partly upon the kind of product, and partly upon the degree of unionization. At the same time, establishments situated in practically the same locality and depending upon the same sources of labor supply are shown to pay widely differing scales of wages, a fact which shows the slight basis upon which the ordinary competition arguments rest.

Corresponding variations are found in the table (Table 5) in which the weekly rates of the establishments in the two groups are described. The factories in the two groups differ in the general level, although the dress and waist firms do not fall so far behind as in the table showing earnings.

The table showing the hours of work of the women employees in clothing factories (Table 6) is concerned with only 416 workers, owing to the fact that factory records of hours worked were not kept for the remaining 1,545 workers. It is probably the case, however, that the findings for these 416 women are fairly typical of the group as a whole. The largest single group of workers are those who worked, on the average, forty-two and less than forty-six hours a week, and the second largest group is made up of those who worked forty-six hours and less than fifty. These two groups include 47.6 per cent. of the total number included in the table. It is therefore to be concluded that the trade does not afford full working time to its employees, taking the year as the unit, a fact which must be taken into account in the discussion of low wages in the industry. Well-known characteristics of the trade are the long hours in the busy season and the counterbalancing short hours in the slack season.

The situation regarding customary hours of work is shown in Table 7 with respect to the hours in each establishment for which records were available. The ordinary working time is shown to be appreciably longer in the dress and waist establishments. In each group the firms differ widely in the average length of running time.

In Tables 8 and 9 and in Diagram I. the fluctuation and duration of employment are analyzed. Table 8 shows the number of employees in each occupation who remained at work for the specified number of months. In the first col-

umn, consisting of those who worked for fifty-two weeks without vacation, the number is naturally small. In the second column, consisting of those who worked for forty-eight or more weeks, the number is still small, and only in the case of one occupation, sample making, does it include one-half of the employees. Plain finishers, examiners and drapers are next in order in this group. On the whole, the more skilled occupations afford steadier employment.

From the records available for the Commission's use it is not clear that the amount of absence shown may be called strictly unemployment. When a name disappears from a pay roll in the sixth month of the year, for example, it is not clear whether the girl has left of her own accord for one of many possible reasons, or whether she has been laid off by her employer. Also, it is not known whether her name may not appear on the pay roll of another establishment, or even in another industry, in which case it is obvious that she cannot be termed "unemployed." The material which could be obtained on this question was not a matter of record and appeared highly unreliable. Consequently, caution has been used in terming the situation described in the present tables "unemployment."

In Table 9 the duration of employment is analyzed according to the establishments involved. The more skilled group, the cloak, suit and skirt workers, show themselves to be the steadier workers. They are employed more months during the year, but work on an average less number of hours a week than dress and waist workers. This is to be explained by the fact that there are two distinct busy seasons, as shown in Diagram I., for cloak, suit and skirt workers, thus making the employment in a sense more regular than the dress and waist workers, who have the one busy season in the spring and work longer hours as a result. The tendency toward irregularity of work is much greater in some establishments than in others.

Diagram I. shows the total number of employees studied as they appeared on the books each week in the year, grouped according to their product. The cloak, suit and skirt industry shows two clearly marked busy seasons, one

in the spring and one in the autumn, while in the dress and waist industry the autumn season is not so important as the spring season. Both industries have dull periods in mid-summer and midwinter.

The remaining tables are concerned with the age, experience and living arrangements of those women employees in clothing factories for whom information could be obtained, considered especially in connection with their wages. Table 10 (a) shows that the largest single age group is composed of girls between the ages of twenty-one and twenty-five. Four hundred and forty, or 63.8 per cent. of the whole number, are less than twenty-five years old. An explanation of the fact that so large a majority of the women employees are young girls is sometimes ascribed to the fact that in such operations as machine operating the speed required often cannot be maintained day by day for more than a few years. Nevertheless, groups of middle-aged women, usually Italian or Jewish, work as finishers year after year in certain factories. In general there is a clear relationship between the amount of earnings and the age of the worker, showing that up to, roughly, the age of thirty-five the earnings tend to increase.

Table 11 shows a clear relationship between the wages received and the years of experience of the worker, a conclusion which fails to support the assertion that after a few years in machine operations the earnings fall back to a lower level.

The percentage of the workers who live at home is shown in Table 12 to be 82.2. The extremely low-paid girls almost without exception lived at home, while at the other end of the scale (among those who earned more than \$9 a week) more than one-fourth lived away from home. When grouped according to age, as in Table 13, the extremely young and the oldest workers without exception lived at home. Both wages and age, then, appear to be important factors in determining the living arrangements of women workers.

SUMMARY OF ANALYSIS.

A summary of the results of the investigation into the wages of women in the women's clothing industry in this State shows that one-half earned less than \$6 a week and nearly one-half earned less than \$100 in the course of the year. The majority averaged less than fifty hours' work a week, and only a small proportion worked as much as eleven months of the year. The larger number are girls less than twenty-five years of age who lived with parents or relatives.

TABLE 1 (a). — Average Weekly Earnings: by Occupations.

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS EARNING — | | | | | | | | | | | | TOTAL. | | | | | |
|--------------------------------------|---|------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|------------|---------------|-------------|--------------|------------|
| | UNDER \$3. | | \$3 AND UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$6. | | \$6 AND UNDER \$7. | | \$7 AND UNDER \$8. | | \$8 AND UNDER \$9. | | \$9 AND OVER. | | Number. | Per Cent. |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | | |
| Machine operating, | 54 | 4.9 | 121 | 11.1 | 155 | 14.2 | 189 | 17.3 | 163 | 14.9 | 159 | 14.5 | 110 | 10.0 | 143 | 13.1 | 1,094 | 100 |
| Dress and waist finishing, | 22 | 6.3 | 42 | 12.0 | 80 | 22.8 | 82 | 23.4 | 40 | 11.4 | 37 | 10.6 | 30 | 8.6 | 17 | 4.9 | 350 | 100 |
| Coat finishing, | - | - | 4 | 3.5 | 11 | 9.6 | 20 | 17.5 | 16 | 14.0 | 22 | 19.4 | 15 | 13.2 | 26 | 22.8 | 114 | 100 |
| Plain finishing, | 4 | 3.5 | 4 | 3.5 | 26 | 23.0 | 22 | 19.5 | 23 | 20.4 | 14 | 12.5 | 10 | 8.8 | 10 | 8.8 | 113 | 100 |
| Pressing, | 4 | 6.9 | 5 | 8.6 | 7 | 12.1 | 18 | 31.0 | 10 | 17.3 | 7 | 12.1 | 5 | 8.6 | 2 | 3.4 | 58 | 100 |
| Examining, | 3 | 7.9 | 6 | 15.8 | 4 | 10.5 | 5 | 13.2 | 8 | 21.0 | 3 | 7.9 | 4 | 10.5 | 5 | 13.2 | 38 | 100 |
| Folding, | - | - | 1 | 4.3 | 4 | 17.4 | 8 | 34.8 | 4 | 17.4 | 6 | 26.1 | - | - | - | - | 23 | 100 |
| Sample making, | - | - | - | - | - | - | - | - | - | - | 2 | 13.3 | 2 | 13.3 | 11 | 73.4 | 15 | 100 |
| Draping, | - | - | - | - | - | - | - | - | 2 | 18.2 | 3 | 27.3 | 1 | 9.1 | 5 | 45.4 | 11 | 100 |
| Miscellaneous, | 4 | 2.8 | 25 | 17.2 | 29 | 20.0 | 24 | 16.6 | 13 | 9.0 | 16 | 11.0 | 16 | 11.0 | 18 | 12.4 | 145 | 100 |
| Total, | 91 | 4.6 | 208 | 10.6 | 316 | 16.1 | 363 | 18.8 | 279 | 14.2 | 269 | 13.7 | 193 | 9.9 | 237 | 12.1 | 1,961 | 100 |

TABLE 1 (b).— *Average Weekly Earnings: by Occupations (Cumulative).*

| OCCUPATIONS. | PER CENT. OF WORKERS EARNING — | | | | | | | |
|---|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| Machine operating, . . . | 4.9 | 16.0 | 30.2 | 47.4 | 62.3 | 76.9 | 86.9 | 13.1 |
| Dress and waist finishing, Coat finishing, . . . | 6.3 | 18.3 | 41.4 | 64.6 | 76.0 | 86.6 | 95.1 | 4.9 |
| Plain finishing, . . . | — | 3.5 | 13.2 | 30.7 | 44.7 | 64.0 | 77.2 | 22.8 |
| Pressing, . . . | 3.5 | 7.1 | 30.1 | 49.6 | 69.9 | 82.3 | 91.2 | 8.8 |
| Examining, . . . | 6.9 | 15.5 | 27.6 | 58.6 | 75.9 | 87.9 | 96.6 | 3.4 |
| Folding, . . . | 7.9 | 23.7 | 34.2 | 47.4 | 68.4 | 76.3 | 86.8 | 13.2 |
| Sample making, . . . | — | 4.3 | 21.7 | 56.5 | 73.9 | 100.0 | 100.0 | — |
| Draping, . . . | — | — | — | — | — | 13.3 | 26.7 | 73.3 |
| Miscellaneous, . . . | — | — | — | — | 18.2 | 45.5 | 54.5 | 45.5 |
| Total, . . . | 2.8 | 20.0 | 40.0 | 56.6 | 65.5 | 76.6 | 87.6 | 12.4 |
| Total, . . . | 4.6 | 15.2 | 31.4 | 50.1 | 64.4 | 78.1 | 87.9 | 12.1 |

TABLE 2. — *Weekly Rates: by Occupations.*

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS WITH WEEKLY RATES OF — | | | | | | | | | | | | | | | | | |
|--------------------------------------|--|-----------|--------------------|------------|--------------------|------------|--------------------|-------------|---------------------|-------------|----------------------|-------------|----------------|-------------|------------|-------------|------------|------------|
| | UNDER \$3. | | \$3 AND UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$7. | | \$7 AND UNDER \$10. | | \$10 AND UNDER \$15. | | \$15 AND OVER. | | TOTAL. | | | |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | | |
| Machine operating, | — | — | 22 | 7.3 | 44 | 14.6 | 42 | 13.9 | 30 | 10.0 | 33 | 11.0 | 25 | 8.3 | 105 | 34.9 | 301 | 100 |
| Dress and waist finishing, | 1 | .4 | 3 | 1.1 | 16 | 5.7 | 65 | 23.3 | 75 | 26.9 | 42 | 15.0 | 34 | 12.2 | 43 | 15.4 | 279 | 100 |
| Coat finishing, | — | — | — | — | — | — | 2 | 2.6 | 9 | 11.8 | 17 | 22.4 | 17 | 22.4 | 31 | 40.8 | 76 | 100 |
| Plain finishing, | — | — | — | — | 4 | 4.4 | 6 | 6.6 | 19 | 20.9 | 16 | 17.6 | 14 | 15.4 | 32 | 35.1 | 91 | 100 |
| Pressing, | — | — | — | — | 3 | 11.1 | 2 | 7.4 | 3 | 11.1 | 6 | 22.2 | 6 | 22.2 | 7 | 26.0 | 27 | 100 |
| Examining, | — | — | 7 | 20.0 | 2 | 5.7 | 1 | 2.8 | 5 | 14.3 | 8 | 22.9 | 3 | 8.6 | 9 | 25.7 | 35 | 100 |
| Folding, | — | — | — | — | 1 | 5.6 | 1 | 5.6 | 8 | 44.4 | 6 | 33.3 | 1 | 5.6 | 1 | 5.6 | 18 | 100 |
| Sample making, | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 11 | 100 |
| Draping, | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 4 | 80.0 | 5 | 100 |
| Miscellaneous, | — | — | 5 | 5.1 | 12 | 12.1 | 18 | 18.2 | 10 | 10.1 | 12 | 12.1 | 11 | 11.1 | 31 | 31.3 | 99 | 100 |
| Total, | 1 | .1 | 37 | 3.9 | 82 | 8.7 | 137 | 14.5 | 159 | 16.9 | 149 | 14.9 | 113 | 13.9 | 273 | 29.9 | 943 | 100 |

NOTE. — Of the 1,961 persons whose records were studied, data concerning rates were not available for 1,019, a majority of whom were piece workers.

TABLE 3. — Annual Earnings: by Occupations.

| OCCUPATIONS. | NUMBER OF WORKERS WITH ANNUAL EARNINGS OF — | | | | | | | | | | Total. |
|--------------------------------------|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|--------------|
| | Under \$100. | \$100 and under \$150. | \$150 and under \$200. | \$200 and under \$250. | \$250 and under \$300. | \$300 and under \$350. | \$350 and under \$400. | \$400 and under \$450. | \$450 and under \$500. | \$500 and over. | |
| Machine operating, | 499 | 130 | 97 | 78 | 71 | 54 | 63 | 39 | 34 | 29 | 1,094 |
| Dress and waist finishing, | 205 | 31 | 20 | 28 | 17 | 17 | 16 | 9 | 4 | 3 | 350 |
| Coat finishing, | 35 | 19 | 14 | 12 | 7 | 4 | 10 | 4 | 3 | 6 | 114 |
| Plain finishing, | 51 | 8 | 3 | 13 | 10 | 16 | 8 | - | 1 | 3 | 113 |
| Pressing, | 33 | 5 | 6 | 5 | 3 | 2 | 1 | 1 | - | 2 | 58 |
| Examining, | 20 | 1 | 1 | 4 | 2 | 2 | 1 | 1 | 3 | 3 | 38 |
| Folding, | 11 | 2 | 2 | 3 | 2 | 1 | 2 | - | - | - | 23 |
| Sample making, | 2 | 1 | 2 | 1 | - | - | - | 2 | - | 7 | 15 |
| Draping, | 3 | 3 | - | 1 | - | - | 1 | - | 2 | 1 | 11 |
| Miscellaneous, | 77 | 10 | 12 | 6 | 9 | 5 | 9 | 8 | 3 | 6 | 145 |
| Total, | 986 | 210 | 157 | 151 | 121 | 101 | 111 | 64 | 50 | 60 | 1,961 |

TABLE 4.—Average Weekly Earnings: by Establishments (Cumulative).

Dress and Waist.

| ESTABLISHMENTS. | PER CENT. OF WORKERS EARNING— | | | | | | | |
|-------------------------|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| No. 1, | 14.2 | 44.2 | 66.4 | 81.9 | 90.3 | 96.0 | 98.2 | 1.8 |
| No. 2, | 1.9 | 10.3 | 27.1 | 51.6 | 63.9 | 78.7 | 86.5 | 13.5 |
| No. 3, | 0.9 | 1.7 | 14.7 | 45.7 | 69.0 | 86.2 | 89.7 | 10.3 |
| No. 4, | 1.7 | 15.7 | 41.7 | 71.3 | 86.1 | 92.2 | 97.4 | 2.6 |
| No. 5, | 2.7 | 17.1 | 36.0 | 55.0 | 68.5 | 89.2 | 95.5 | 4.5 |
| No. 6, | 10.1 | 28.1 | 46.1 | 58.4 | 74.2 | 83.1 | 94.4 | 5.6 |
| No. 7, | 1.2 | 2.4 | 3.5 | 12.9 | 21.2 | 44.7 | 76.5 | 23.5 |
| No. 8, | 7.3 | 19.5 | 37.8 | 59.8 | 65.9 | 79.3 | 84.1 | 15.9 |
| No. 9, | — | 2.7 | 6.7 | 13.3 | 25.3 | 50.7 | 74.7 | 25.3 |
| No. 10, | 6.9 | 18.1 | 27.8 | 51.4 | 76.4 | 84.7 | 93.1 | 6.9 |
| No. 11, | 2.9 | 11.6 | 44.9 | 68.1 | 76.8 | 82.6 | 91.3 | 8.7 |
| No. 12, | 20.0 | 46.2 | 70.8 | 87.7 | 98.5 | 100.0 | 100.0 | — |
| No. 13, | 3.2 | 7.9 | 14.3 | 30.2 | 50.8 | 68.3 | 82.5 | 17.5 |
| No. 14, | 1.7 | 8.5 | 16.9 | 33.9 | 40.7 | 57.6 | 74.6 | 25.4 |
| No. 15, | — | — | 13.8 | 37.9 | 67.1 | 84.5 | 89.7 | 10.3 |
| No. 16, | 4.2 | 14.6 | 31.3 | 45.8 | 58.3 | 79.2 | 93.8 | 6.2 |
| No. 17, | — | 4.7 | 18.6 | 39.5 | 65.1 | 79.1 | 88.4 | 11.6 |
| No. 18, | — | 8.3 | 16.7 | 27.8 | 44.4 | 66.7 | 75.0 | 25.0 |
| No. 19, | 5.7 | 20.0 | 37.1 | 54.3 | 68.6 | 82.9 | 88.6 | 11.4 |
| No. 20, | — | — | — | 13.3 | 26.7 | 50.0 | 66.7 | 33.3 |
| No. 21, | — | 6.7 | 16.7 | 23.3 | 36.7 | 50.0 | 90.0 | 10.0 |
| No. 22, | 10.3 | 17.2 | 44.8 | 65.5 | 79.3 | 86.2 | 89.7 | 10.3 |
| Total, | 5.1 | 17.0 | 33.2 | 52.2 | 66.2 | 79.7 | 89.2 | 10.8 |

Cloak, Suit and Skirt.

| | | | | | | | | |
|-------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| No. 23, | — | 2.1 | 8.3 | 25.0 | 31.3 | 52.1 | 66.7 | 33.3 |
| No. 24, | — | — | 6.9 | 10.3 | 24.1 | 37.9 | 55.2 | 44.8 |
| No. 25, | — | 7.4 | 18.5 | 40.7 | 44.4 | 66.7 | 81.5 | 18.5 |
| No. 26, | — | — | 19.2 | 38.5 | 53.8 | 61.5 | 73.1 | 26.9 |
| No. 27, | — | 3.8 | 30.8 | 50.0 | 53.8 | 65.4 | 84.6 | 15.4 |
| No. 28, | — | — | 20.0 | 50.0 | 75.0 | 95.0 | 95.0 | 5.0 |
| No. 29, | — | — | 10.0 | 35.0 | 60.0 | 80.0 | 90.0 | 10.0 |
| No. 30, | — | 6.3 | 31.3 | 50.0 | 75.0 | 87.5 | 93.8 | 6.2 |
| No. 31, | 6.3 | 6.3 | 18.8 | 31.3 | 81.3 | 81.3 | 87.5 | 12.5 |
| No. 32, | — | — | 18.2 | 36.4 | 54.5 | 54.5 | 81.8 | 18.2 |
| No. 33, | 9.1 | 18.2 | 54.5 | 54.5 | 81.8 | 90.9 | 90.9 | 9.1 |
| No. 34, | 9.1 | 18.2 | 27.3 | 45.5 | 63.6 | 90.9 | 90.9 | 9.1 |
| No. 35, | 12.5 | 25.0 | 62.5 | 75.0 | 75.0 | 87.5 | 100.0 | — |
| No. 36, | — | — | — | — | — | 100.0 | 100.0 | — |
| Total, | 1.5 | 4.4 | 20.0 | 37.0 | 52.6 | 67.8 | 79.6 | 20.4 |
| Total of all establishments. | 4.6 | 15.2 | 31.4 | 50.1 | 64.4 | 78.1 | 87.9 | 12.1 |

TABLE 5. — *Weekly Rates: by Establishments (Cumulative).**Dress and Waist.*

| ESTABLISHMENTS. | PER CENT. OF WORKERS WITH WEEKLY RATES OF — | | | | | | | |
|-----------------|---|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| No. 1. | — | 16.9 | 45.8 | 68.9 | 82.5 | 91.5 | 98.3 | 1.7 |
| No. 2. | — | 2.2 | 6.7 | 31.1 | 48.9 | 68.9 | 80.0 | 20.0 |
| No. 3. | — | — | — | 2.4 | 33.3 | 69.0 | 88.1 | 11.9 |
| No. 4. | — | — | 23.5 | 64.7 | 85.3 | 88.2 | 94.1 | 5.9 |
| No. 5. | — | 12.0 | 32.0 | 48.0 | 64.0 | 72.0 | 72.0 | 28.0 |
| No. 6. | — | — | — | 38.7 | 74.2 | 80.6 | 90.3 | 9.7 |
| No. 7. | — | — | 2.4 | 2.4 | 10.6 | 22.4 | 38.8 | 61.2 |
| No. 8. | — | 4.4 | 8.9 | 35.6 | 75.6 | 88.9 | 91.1 | 8.9 |
| No. 9. | — | — | 1.5 | 10.4 | 11.9 | 19.4 | 34.3 | 65.7 |
| No. 11. | 2.4 | 4.8 | 7.1 | 26.2 | 45.2 | 59.5 | 78.8 | 26.2 |
| No. 12. | — | — | 25.0 | 25.0 | 62.5 | 100.0 | 100.0 | — |
| No. 13. | — | — | — | 5.7 | 5.7 | 25.7 | 42.9 | 57.1 |
| No. 15. | — | — | — | 9.1 | 36.4 | 45.5 | 54.5 | 45.5 |
| No. 16. | — | — | 12.0 | 48.0 | 64.0 | 76.0 | 88.0 | 12.0 |
| No. 17. | — | — | — | 3.4 | 27.6 | 48.3 | 65.5 | 34.5 |
| No. 18. | — | — | 11.1 | 11.1 | 55.6 | 58.6 | 77.8 | 22.2 |
| No. 19. | — | — | — | 38.3 | 44.4 | 66.7 | 66.7 | 33.3 |
| No. 20. | — | — | — | — | 42.9 | 85.7 | 100.0 | — |
| No. 21. | — | — | — | 12.5 | 25.0 | 45.8 | 50.0 | 50.0 |
| No. 22. | — | — | — | — | — | 75.0 | 75.0 | 25.0 |
| Total. | .1 | 5.1 | 15.5 | 32.6 | 49.7 | 63.5 | 74.3 | 25.7 |

Cloak, Suit and Skirt.

| | | | | | | | | |
|-------------------------------------|-----------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| No. 23. | — | — | 9.1 | 9.1 | 31.9 | 45.5 | 45.5 | 54.5 |
| No. 24. | — | — | — | — | 11.1 | 33.3 | 61.1 | 38.9 |
| No. 25. | — | — | — | 3.7 | 25.9 | 33.3 | 44.4 | 55.6 |
| No. 26. | — | — | — | 14.3 | 50.0 | 50.0 | 71.4 | 28.6 |
| No. 27. | — | — | 7.7 | 26.9 | 42.3 | 53.8 | 57.7 | 42.3 |
| No. 28. | — | — | — | — | — | 30.0 | 60.0 | 40.0 |
| No. 29. | — | — | — | — | 6.7 | 26.7 | 60.0 | 40.0 |
| No. 30. | — | — | — | — | 7.7 | 53.8 | 92.3 | 7.7 |
| No. 31. | — | — | — | — | — | 20.0 | 40.0 | 60.0 |
| No. 32. | — | — | — | 9.1 | 18.2 | 36.4 | 38.4 | 61.6 |
| No. 33. | — | — | — | — | 33.3 | 50.0 | 66.7 | 33.3 |
| No. 34. | — | — | — | — | 28.6 | 71.4 | 85.7 | 14.3 |
| No. 35. | — | — | — | 14.3 | 42.9 | 71.4 | 85.7 | 14.3 |
| Total. | — | — | 2.0 | 7.1 | 23.0 | 41.3 | 58.7 | 41.3 |
| Total of all establishments. | .1 | 4.0 | 12.7 | 27.3 | 44.2 | 59.0 | 71.0 | 29.0 |

NOTE. — Data concerning rates were not available for Establishments Nos. 10, 14 and 36.

TABLE 6. — *Hours of Labor and Average Weekly Earnings.*

| AVERAGE HOURS PER WEEK. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| Less than 30, . . . | 9 | 2 | 3 | 2 | — | — | — | — | 16 |
| 30 and less than 34, . . . | — | 12 | 2 | 4 | 7 | 1 | — | — | 26 |
| 34 and less than 38, . . . | 1 | 8 | 15 | 14 | 7 | 7 | 7 | 1 | 60 |
| 38 and less than 42, . . . | 3 | 7 | 20 | 16 | 14 | 10 | 14 | 6 | 90 |
| 42 and less than 46, . . . | 1 | 8 | 18 | 22 | 16 | 17 | 7 | 15 | 104 |
| 46 and less than 50, . . . | — | 3 | 14 | 26 | 13 | 14 | 6 | 18 | 94 |
| 50 and less than 54, . . . | — | 4 | 7 | 4 | 2 | 1 | 2 | 1 | 21 |
| 54 and over, . . . | — | — | — | 1 | — | 2 | 1 | 1 | 5 |
| Total, . . . | 14 | 44 | 79 | 89 | 89 | 53 | 37 | 42 | 416 |

NOTE. — Data concerning hours were not available for 1,545 workers.

TABLE 7. — *Hours of Labor: by Establishments (Cumulative).**Dress and Waist.*

| ESTABLISHMENTS. | PER CENT. OF WORKERS WORKING — | | | | | | | |
|-------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| | Less than 30 Hours. | Less than 34 Hours. | Less than 38 Hours. | Less than 42 Hours. | Less than 46 Hours. | Less than 50 Hours. | Less than 54 Hours. | 54 Hours and over. |
| No. 3, | - | 2.7 | 8.1 | 29.7 | 62.2 | 97.3 | 100.0 | - |
| No. 4, | - | 2.8 | 8.3 | 16.7 | 36.1 | 69.4 | 97.2 | 2.8 |
| No. 5, | - | - | - | 21.4 | 50.0 | 78.6 | 100.0 | - |
| No. 6, | 23.3 | 43.3 | 60.0 | 83.3 | 93.3 | 100.0 | 100.0 | - |
| No. 8, | 4.4 | 8.9 | 11.1 | 24.4 | 62.2 | 97.8 | 100.0 | - |
| No. 11, | - | 4.0 | 8.0 | 20.0 | 56.0 | 96.0 | 100.0 | - |
| No. 13, | 2.3 | 4.7 | 23.3 | 41.9 | 79.1 | 97.7 | 100.0 | - |
| No. 16, | - | - | 12.0 | 24.0 | 60.0 | 100.0 | 100.0 | - |
| No. 17, | - | 5.4 | 35.1 | 64.9 | 83.8 | 97.3 | 100.0 | - |
| No. 21, | 5.9 | 11.8 | 17.6 | 82.4 | 100.0 | 100.0 | 100.0 | - |
| Total, | 3.4 | 8.0 | 18.6 | 39.0 | 67.2 | 93.2 | 99.7 | .3 |

Cloak, Suit and Skirt.

| | | | | | | | | |
|-------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| No. 24, | - | - | - | 27.8 | 44.4 | 77.8 | 77.8 | 22.2 |
| No. 25, | - | 7.4 | 33.3 | 66.7 | 88.9 | 100.0 | 100.0 | - |
| No. 28, | 5.0 | 15.0 | 75.0 | 95.0 | 100.0 | 100.0 | 100.0 | - |
| No. 31, | 20.0 | 90.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | - |
| No. 32, | 9.1 | 9.1 | 18.2 | 63.6 | 90.9 | 100.0 | 100.0 | - |
| No. 35, | 14.3 | 14.3 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | - |
| Total, | 5.4 | 17.2 | 45.2 | 71.0 | 84.9 | 95.7 | 95.7 | 4.3 |
| Total of all establishments. | 3.8 | 10.1 | 24.5 | 46.2 | 71.2 | 93.8 | 93.8 | 1.2 |

NOTE. — Data concerning hours were not available in 20 establishments.

TABLE 8. — *Fluctuation of Employment among 1,961 Workers, by Occupations.*

| OCCUPATIONS. | PER CENT. OF WORKERS EMPLOYED FOR SPECIFIED NUMBER OF MONTHS — | | | | | | | | | | | |
|--------------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Machine operating, | 2.0 | 12.2 | 20.8 | 25.0 | 30.3 | 37.0 | 41.7 | 44.9 | 55.8 | 64.3 | 74.3 | 100 |
| Dress and waist finishing, | 2.0 | 13.4 | 18.6 | 22.9 | 26.3 | 29.4 | 33.1 | 36.9 | 42.3 | 50.6 | 58.9 | 100 |
| Coat finishing, | 3.5 | 10.5 | 17.5 | 25.4 | 31.6 | 38.6 | 50.0 | 54.4 | 64.0 | 68.4 | 84.2 | 100 |
| Plain finishing, | 4.4 | 21.2 | 32.7 | 38.1 | 43.4 | 44.2 | 44.2 | 50.4 | 57.5 | 63.7 | 74.3 | 100 |
| Pressing, | 1.7 | 12.1 | 12.1 | 13.8 | 19.0 | 20.7 | 34.5 | 37.9 | 46.6 | 62.1 | 77.6 | 100 |
| Examining, | 7.9 | 21.1 | 26.3 | 31.6 | 42.1 | 47.4 | 47.4 | 47.4 | 63.2 | 76.3 | 84.2 | 100 |
| Folding, | 4.3 | 17.4 | 21.7 | 26.1 | 30.4 | 34.8 | 43.5 | 43.5 | 52.2 | 52.2 | 69.6 | 100 |
| Sample making, | 6.7 | 53.3 | 53.3 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 | 80.0 | 86.7 | 86.7 | 100 |
| Draping, | - | 18.2 | 27.3 | 27.3 | 36.4 | 36.4 | 45.5 | 45.5 | 63.6 | 72.7 | 81.8 | 100 |
| Miscellaneous, | 2.1 | 17.2 | 26.9 | 28.3 | 33.8 | 35.9 | 37.9 | 42.8 | 51.0 | 59.3 | 72.4 | 100 |
| Total, | 2.4 | 13.3 | 21.5 | 25.3 | 30.9 | 36.0 | 40.6 | 44.1 | 53.6 | 61.9 | 72.4 | 100 |

TABLE 9. — *Fluctuation of Employment among 1,961 Workers: by Establishments.*
Dress and Waist.

| ESTABLISHMENTS. | PER CENT. OF WORKERS EMPLOYED FOR SPECIFIED NUMBER OF MONTHS — | | | | | | | | | | | |
|-----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| No. 1. | 8.4 | 23.9 | 26.5 | 4.0 | 17.3 | 27.4 | 39.4 | 45.1 | 54.9 | 63.7 | 70.4 | 100 |
| No. 2. | 5.2 | 14.7 | 14.7 | 29.7 | 31.6 | 34.8 | 37.4 | 39.4 | 45.8 | 53.5 | 67.1 | 100 |
| No. 3. | 1.7 | 5.2 | 8.7 | 19.8 | 28.4 | 37.9 | 39.7 | 40.5 | 56.0 | 66.0 | 81.0 | 100 |
| No. 4. | - | 9.0 | 13.9 | 13.9 | 17.4 | 20.9 | 27.8 | 27.8 | 39.1 | 47.0 | 57.4 | 100 |
| No. 5. | 1.1 | 2.2 | 2.2 | 23.4 | 25.2 | 28.8 | 32.4 | 36.0 | 45.9 | 55.9 | 77.5 | 100 |
| No. 6. | - | 4.9 | 5.6 | 5.6 | 60.0 | 64.7 | 69.4 | 72.9 | 77.6 | 81.6 | 89.4 | 100 |
| No. 7. | 4.9 | 25.6 | 54.1 | 57.6 | 60.0 | 64.7 | 69.4 | 72.9 | 77.6 | 81.6 | 89.4 | 100 |
| No. 8. | 10.7 | 32.0 | 35.4 | 36.6 | 39.0 | 39.0 | 42.7 | 43.9 | 52.4 | 62.2 | 72.0 | 100 |
| No. 9. | 4.2 | 11.1 | 38.7 | 44.0 | 44.0 | 48.0 | 48.0 | 52.0 | 60.0 | 69.3 | 72.0 | 100 |
| No. 10. | 1.4 | 4.3 | 18.1 | 23.6 | 27.8 | 31.9 | 37.5 | 44.4 | 52.8 | 63.6 | 84.7 | 100 |
| No. 11. | - | 1.5 | 5.8 | 10.1 | 13.0 | 14.5 | 17.4 | 17.4 | 26.1 | 33.3 | 43.5 | 100 |
| No. 12. | 1.6 | 1.5 | 1.5 | 1.5 | 3.1 | 6.2 | 7.7 | 12.3 | 21.5 | 35.4 | 61.5 | 100 |
| No. 13. | - | 4.8 | 9.5 | 12.7 | 14.3 | 19.0 | 20.6 | 20.6 | 38.1 | 42.9 | 50.8 | 100 |
| No. 14. | 1.7 | 37.3 | 37.3 | 45.8 | 55.9 | 66.1 | 67.8 | 72.9 | 86.4 | 93.2 | 94.9 | 100 |
| No. 15. | 2.1 | 43.1 | 55.2 | 60.3 | 70.7 | 79.3 | 81.0 | 82.8 | 84.5 | 84.5 | 91.4 | 100 |
| No. 16. | - | 2.3 | 45.8 | 54.2 | 58.3 | 64.6 | 66.7 | 68.8 | 70.8 | 72.9 | 75.0 | 100 |
| No. 17. | - | 2.3 | 11.6 | 16.3 | 25.6 | 30.2 | 32.6 | 32.6 | 44.2 | 55.8 | 65.1 | 100 |
| No. 18. | - | 16.7 | 19.4 | 19.4 | 19.4 | 36.1 | 36.1 | 38.9 | 55.6 | 61.1 | 75.0 | 100 |
| No. 19. | 2.9 | 20.0 | 23.9 | 22.9 | 22.9 | 28.6 | 37.1 | 42.9 | 42.9 | 45.7 | 51.4 | 100 |
| No. 20. | - | 20.0 | 20.0 | 23.3 | 26.7 | 28.7 | 43.3 | 56.7 | 83.3 | 86.7 | 86.7 | 100 |
| No. 21. | - | 23.3 | 63.3 | 66.7 | 73.3 | 76.7 | 80.0 | 83.3 | 86.7 | 90.0 | 93.3 | 100 |
| No. 22. | 3.4 | 20.7 | 24.1 | 24.1 | 31.0 | 37.9 | 41.4 | 51.7 | 55.2 | 58.6 | 69.0 | 100 |
| Total. | 2.2 | 13.4 | 20.5 | 24.5 | 29.4 | 34.7 | 39.3 | 42.6 | 52.3 | 60.9 | 71.1 | 100 |

Cloak, Suit and Skirt.

| | | | | | | | | | | | | |
|-------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| No. 23, | - | 14.6 | 45.8 | 47.9 | 54.2 | 55.3 | 58.3 | 64.6 | 72.9 | 83.3 | 87.5 | 100 |
| No. 24, | - | - | 6.9 | 10.3 | 20.7 | 27.6 | 37.9 | 37.9 | 44.8 | 51.7 | 72.4 | 100 |
| No. 25, | - | 3.7 | 11.1 | 23.2 | 22.2 | 29.6 | 44.4 | 44.4 | 55.6 | 59.3 | 85.2 | 100 |
| No. 26, | 23.1 | 57.7 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 76.9 | 100 |
| No. 27, | 3.8 | 30.8 | 46.2 | 50.0 | 53.8 | 53.8 | 53.8 | 61.5 | 76.9 | 80.8 | 88.5 | 100 |
| No. 28, | - | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 45.0 | 60.0 | 65.0 | 80.0 | 85.0 | 100 |
| No. 29, | 5.0 | 10.0 | 10.0 | 25.0 | 55.0 | 55.0 | 60.0 | 60.0 | 75.0 | 75.0 | 90.0 | 100 |
| No. 30, | - | - | 18.8 | 31.3 | 37.5 | 43.8 | 50.0 | 56.3 | 68.8 | 75.0 | 81.3 | 100 |
| No. 31, | - | 31.3 | 37.5 | 50.0 | 50.0 | 50.0 | 56.3 | 56.3 | 63.6 | 69.5 | 75.0 | 100 |
| No. 32, | - | 9.1 | 18.2 | 27.3 | 45.5 | 45.5 | 45.5 | 63.6 | 45.5 | 72.7 | 81.3 | 100 |
| No. 33, | 9.1 | 18.2 | 18.2 | 18.2 | 18.2 | 18.2 | 18.2 | 27.3 | 45.5 | 45.5 | 63.6 | 100 |
| No. 34, | - | 9.1 | 18.2 | 18.2 | 18.2 | 27.3 | 27.3 | 27.3 | 36.4 | 54.5 | 63.6 | 100 |
| No. 35, | - | - | - | - | - | 27.3 | 27.3 | 12.5 | 12.5 | 54.5 | 63.6 | 100 |
| No. 36, | - | - | - | - | - | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100 |
| Total, | 3.3 | 16.3 | 28.1 | 33.7 | 60.0 | 68.7 | 68.5 | 53.3 | 61.9 | 68.1 | 80.4 | 100 |
| Total of all establishments, | 2.4 | 13.3 | 21.5 | 25.3 | 30.3 | 36.0 | 40.6 | 44.1 | 53.6 | 61.9 | 72.4 | 100 |

DIAGRAM I.

Curve Showing Per Cent. of Employment for 270 Cloak, Suit, and Skirt Workers and 1,691 Dress and Waist Workers during 52 Weeks.

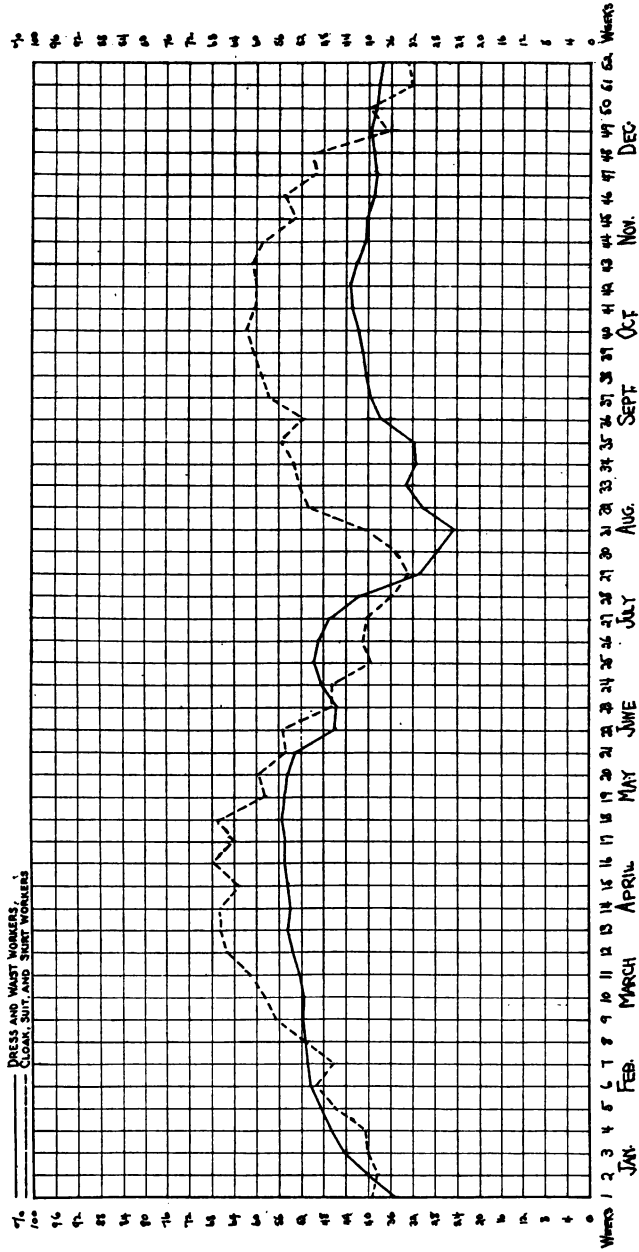


TABLE 10 (a). — *Average Weekly Earnings: by Age Groups.*

| AGE. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| 14 and less than 16, . | 3 | 2 | - | - | - | - | - | - | 5 |
| 16 and less than 18, . | 1 | 15 | 11 | 8 | 7 | 2 | 1 | - | 45 |
| 18 and less than 21, . | 1 | 11 | 27 | 39 | 21 | 27 | 15 | 8 | 149 |
| 21 and less than 25, . | 2 | 7 | 22 | 43 | 52 | 42 | 30 | 43 | 241 |
| 25 and less than 30, . | - | 1 | 2 | 11 | 11 | 19 | 21 | 20 | 85 |
| 30 and less than 35, . | - | - | 5 | 4 | 9 | 8 | 6 | 15 | 47 |
| 35 and less than 40, . | - | 1 | 2 | 11 | 5 | 8 | 8 | 9 | 44 |
| 40 and less than 45, . | - | 1 | 5 | 5 | 6 | 3 | 6 | 6 | 32 |
| 45 and less than 50, . | - | 1 | 1 | 6 | 2 | 4 | 2 | 3 | 19 |
| 50 and less than 55, . | - | - | 2 | - | 2 | 2 | 2 | 7 | 15 |
| 55 and less than 60, . | 1 | - | - | - | - | 2 | 1 | - | 4 |
| 60 and over, . . . | - | 1 | 2 | 1 | - | - | - | - | 4 |
| Total, . . . | 8 | 40 | 79 | 123 | 115 | 117 | 92 | 111 | 690 |

NOTE. — Data for age were not available for 1,271 workers.

TABLE 10 (b). — *Average Weekly Earnings: by Age Groups (Cumulative).*

| AGE. | NUMBER OF WORKERS EARNING — | | | | | | | |
|------------------------|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| 14 and less than 16, . | 3 | 5 | 5 | 5 | 5 | 5 | 5 | - |
| 16 and less than 18, . | 1 | 16 | 27 | 35 | 42 | 44 | 45 | - |
| 18 and less than 21, . | 1 | 12 | 39 | 78 | 99 | 126 | 141 | 8 |
| 21 and less than 25, . | 2 | 9 | 31 | 74 | 126 | 168 | 198 | 43 |
| 25 and less than 30, . | - | 1 | 3 | 14 | 25 | 44 | 65 | 20 |
| 30 and less than 35, . | - | - | 5 | 9 | 18 | 26 | 32 | 15 |
| 35 and less than 40, . | - | 1 | 3 | 14 | 19 | 27 | 35 | - |
| 40 and less than 45, . | - | 1 | 6 | 11 | 17 | 20 | 26 | 6 |
| 45 and less than 50, . | - | 1 | 2 | 8 | 10 | 14 | 16 | 3 |
| 50 and less than 55, . | - | - | 2 | 2 | 4 | 6 | 8 | 7 |
| 55 and less than 60, . | 1 | 1 | 1 | 1 | 1 | 3 | 4 | - |
| 60 and over, . . . | - | 1 | 3 | 4 | 4 | 4 | 4 | - |
| Total, . . . | 8 | 48 | 127 | 255 | 370 | 487 | 579 | 111 |

NOTE. — Data for age were not available for 1,271 workers.

TABLE 11. — *Average Weekly Earnings: by Years of Experience.*

| YEARS OF EXPERIENCE. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|--------------------------------|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| Less than 1, | 4 | 18 | 21 | 17 | 6 | 6 | 5 | — | 77 |
| 1 and less than 2, | 1 | 8 | 10 | 17 | 6 | 6 | 4 | 2 | 54 |
| 2 and less than 3, | — | 1 | 9 | 18 | 17 | 15 | 5 | 5 | 70 |
| 3 and less than 4, | — | — | 15 | 16 | 21 | 13 | 10 | 3 | 78 |
| 4 and less than 5, | — | 1 | 3 | 11 | 12 | 18 | 7 | 7 | 59 |
| 5 and less than 6, | — | 2 | 1 | 7 | 14 | 10 | 8 | 15 | 57 |
| 6 and less than 7, | — | — | — | 5 | 4 | 11 | 7 | 10 | 37 |
| 7 and less than 8, | — | 1 | 1 | 5 | 4 | 5 | 5 | 14 | 35 |
| 8 and less than 9, | — | — | 3 | — | 4 | 4 | 5 | 7 | 23 |
| 9 and less than 10, | — | — | — | 1 | 2 | — | 4 | 6 | 13 |
| 10 and less than 11, | — | — | — | 2 | 2 | 1 | 6 | 7 | 18 |
| 11 and less than 12, | — | — | — | — | 2 | 1 | — | 2 | 5 |
| 12 and less than 13, | — | — | — | 2 | 2 | 3 | 4 | 3 | 14 |
| 13 and less than 14, | — | — | — | — | — | 2 | — | 1 | 3 |
| 14 and less than 15, | — | — | 1 | — | — | — | 2 | 4 | 7 |
| 15 and over, | — | — | 3 | 1 | 4 | 4 | 4 | 13 | 29 |
| Total, | 5 | 31 | 67 | 102 | 100 | 99 | 76 | 99 | 579 |

NOTE. — Data concerning years of experience were not available for 1,382 workers.

TABLE 12. — *Home Conditions and Average Weekly Earnings (Cumulative).*

| HOME CONDITIONS. | NUMBER OF WORKERS EARNING — | | | | | | | |
|----------------------------------|-----------------------------|------------|------------|------------|------------|------------|------------|---------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| Living at home, | 8 | 45 | 112 | 218 | 308 | 406 | 482 | 85 |
| Living away from home, | — | 2 | 13 | 34 | 58 | 77 | 93 | 30 |
| Total, | 8 | 47 | 125 | 252 | 366 | 483 | 575 | 115 |

NOTE. — Data concerning home conditions were not available for 1,271 workers.

TABLE 13. — *Home Conditions for 682 Employees: by Age Groups.*

| AGE. | NUMBER AND PER CENT. OF WORKERS — | | | | TOTAL. | |
|----------------------------|-----------------------------------|-------------|------------------------|-------------|------------|------------|
| | LIVING AT HOME. | | LIVING AWAY FROM HOME. | | | |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. |
| 14 and less than 16, . . . | 5 | 100.0 | — | — | 5 | 100 |
| 16 and less than 18, . . . | 44 | 97.8 | 1 | 2.2 | 45 | 100 |
| 18 and less than 21, . . . | 122 | 82.4 | 26 | 17.6 | 148 | 100 |
| 21 and less than 25, . . . | 195 | 81.6 | 44 | 18.4 | 239 | 100 |
| 25 and less than 30, . . . | 69 | 83.1 | 14 | 16.9 | 83 | 100 |
| 30 and less than 35, . . . | 36 | 78.3 | 10 | 21.7 | 46 | 100 |
| 35 and less than 40, . . . | 34 | 79.1 | 9 | 20.9 | 43 | 100 |
| 40 and less than 45, . . . | 27 | 84.4 | 5 | 15.6 | 32 | 100 |
| 45 and less than 50, . . . | 11 | 61.1 | 7 | 38.9 | 18 | 100 |
| 50 and less than 55, . . . | 10 | 66.7 | 5 | 33.3 | 15 | 100 |
| 55 and less than 60, . . . | 4 | 100.0 | — | — | 4 | 100 |
| 60 and over, . . . | 4 | 100.0 | — | — | 4 | 100 |
| Total, . . . | 561 | 82.3 | 121 | 17.7 | 682 | 100 |

NOTE. — Data for age and home conditions were not available for 1,279 workers.

WAGES OF WOMEN IN HOSIERY AND KNIT GOODS FACTORIES IN MASSACHUSETTS.

STATISTICS OF MANUFACTURE.

The art of knitting is most generally believed to have been invented in Europe at some date not earlier than the late middle ages, and is therefore of much later origin than that of weaving. Whatever country is responsible for its invention, the process was probably soon introduced into Scotland, England and France, the first known references to it being found in English laws of the fifteenth century, which show its increasing use in that country in the manufacture of hosiery or leggins, caps, gloves and similar articles of wearing apparel.¹ It was soon recognized that the elasticity of knitted fabric makes it better adapted than woven goods for garments of this nature, which are required to fit close to the body; and in consequence wherever knitting was

¹ W. Felkin, "History of the Machine-wrought Hosiery and Lace Manufactures," London, 1867, p. 16.

introduced it was rapidly adopted as the universal household art, which it has remained to the present day.

Knitting by machine was first made possible in the year 1589, when the Rev. William Lee of Nottingham invented the stocking frame. The first important addition to Lee's frame was made in 1758 by Strutt's invention of a device for knitting a ribbed web. Hand frames modeled on the principle of Lee's invention were in general use until after 1850. It is interesting to note that the first instance of the successful application of power to the stocking frame occurred in 1832 in Cohoes, N. Y., whereas in England power frames were not generally introduced until after 1845.¹

Machine knitting in its present form is largely a product of the last half century. Progress in the invention and use of automatic flat-bed and circular knitting frames has been rapid throughout this period, and this fact, together with the introduction of a large number of specialized seaming and finishing machines, has made possible a greatly increased output of machine-made knit goods of all kinds at reduced cost, while at the same time improving the quality of the product. In 1849, the first year for which statistics of manufacture of the hosiery and knit goods industry were collected for the United States government, the census returns show the existence of 85 establishments located in 10 States, with an average number of 2,325 wage earners and a total annual output valued at about a million dollars. Within the next ten years, a period which marks the rapid development of technical improvements and the widespread introduction of power machinery, the number of factories more than doubled, while the average number of wage earners increased almost four times and the value of the product six times. As shown by the following tables the industry has developed steadily though somewhat irregularly up to the present time, its growth during the last thirty years being more rapid than that of any other of the textile industries. The increase in output has been accompanied by a still greater increase in per capita consumption of the domestic product, the expenditure per capita for

¹ United States, eighth census, Vol. 3, p. xliii.

knit goods in the year 1905 being \$1.77, while in 1880 it was only 74 cents, an increase which occurred entirely in goods of American production.¹

Manufacture of Hosiery and Knit Goods,² United States, 1849-1909.³

| YEAR. | Number of Establishments. | Wage Earners (Average Number). | Wages. | Cost of Materials. | Value of Products. | Value added by Manufacture. |
|-----------------|---------------------------|--------------------------------|--------------|--------------------|--------------------|-----------------------------|
| 1909, | 1,374 | 129,375 | \$44,740,223 | \$110,241,053 | \$200,143,527 | \$89,902,474 |
| 1904, | 1,144 | 104,092 | 31,614,607 | 76,789,348 | 137,076,454 | 60,287,106 |
| 1899, | 1,006 | 83,691 | 24,434,497 | 51,195,330 | 95,833,692 | 44,638,362 |
| 1889, | 824 | 59,774 | 16,613,970 | 35,949,865 | 67,446,788 | 31,496,923 |
| 1879, | 398 | 30,699 | 6,839,195 | 15,449,991 | 29,613,581 | 14,163,590 |
| 1869, | 248 | 14,788 | 4,429,085 | 9,835,823 | 18,411,564 | 8,575,741 |
| 1859, | 197 | 9,103 | 1,661,972 | 3,202,317 | 7,280,606 | 4,078,289 |
| 1849, | 85 | 2,325 | 360,336 | 415,113 | 1,028,102 | 612,989 |

Increase in Value of Product, Hosiery and Knit Goods,⁴ 1849-1909.

| YEAR. | Value of Product. | Amount of Increase. | Per Cent. of Increase. |
|-----------------|-------------------|---------------------|------------------------|
| 1909, | \$200,143,527 | \$104,309,835 | 108.8 |
| 1899, | 95,833,692 | 23,386,904 | 42.1 |
| 1889, | 67,446,788 | 37,833,207 | 127.8 |
| 1879, | 29,613,581 | 11,202,017 | 60.8 |
| 1869, | 18,411,564 | 11,130,958 | 152.9 |
| 1859, | 7,280,606 | 6,252,504 | 608.2 |
| 1849, | 1,028,102 | - | - |

¹ "Considering the great decrease in the cost of production and the selling price it is probably not making an exaggerated estimate to assert that the people of the United States purchased from three to four times as much machine-knit apparel, in quantity, per capita [in 1905], as they did twenty-five years ago." — United States Census of Manufactures, 1905, Bulletin 74, p. 71.

² Including both power and hand-knit goods. "In addition, hosiery and knit goods to the value of \$2,975,749 were made by establishments engaged primarily in the manufacture of boots and shoes, rubber; clothing, men's, including shirts; clothing, women's; cotton goods, including cotton small wares; gloves and mittens, leather; hats and caps, other than felt, straw, and wool; millinery and lace goods; silk and silk goods, including throwsters; and woolen, worsted and felt goods, and wool hats." United States, thirteenth census, Vol. VIII., p. 393.

³ *Ibid.*, p. 393.

⁴ Computed from Table 64, United States, thirteenth census, Vol. VIII., p. 393.

According to the census figures for 1909,¹ New York and Pennsylvania take the lead in the knit goods industry, producing, respectively, 33.5 per cent. and 24.8 per cent. of the value of the total product for the United States. Massachusetts stands third, with 7.4 per cent. With respect to the nature of the goods manufactured, New York specializes largely in underwear, which in 1909 constituted 64 per cent. of the total value of knit goods produced in that State, while hosiery constituted 62.1 per cent. of the Pennsylvania product. Massachusetts can hardly be said to specialize in any one line, although underwear constituted 54.9 per cent. of the knit goods produced there in the year 1909.² In 1913, according to the figures given by the Massachusetts Bureau of Statistics, there were 65 establishments in the State, employing an average number of 10,739 persons, of whom 7,807, or 72.7 per cent were women, and producing goods to the value of \$16,693,510. Statistics for the years 1914 and 1915, showing the effect of the European war upon the knit goods industry in this State, are not yet available. That the export business of this industry has been greatly increased during the last year is shown by the fact that for the nine months ending Sept. 15, 1915, exports of knit goods from the United States totaled \$12,181,384, while the figures for the corresponding period of the year 1914 were \$1,927,619, and in 1913, \$2,040,934.³

¹ United States, thirteenth census, Vol. VIII., pp. 722, 723.

² Computed from United States, thirteenth census, Vol. IX., pp. 831, 1070, and 514.

³ United States, Department of Commerce, Monthly Summary of Foreign Commerce of the United States, September, 1915, p. 29.

*Manufacture of Hosiery and Knit Goods by States.*¹

| STATE. | Number of Estab- lishments, 1910. | Number in Industry. | Capital. | Value of Products. |
|--|--|---------------------------|------------|-----------------------|
| Alabama, | 6 | 634 | \$627,282 | \$591,000 |
| California, | 6 | 316 | 515,170 | 451,970 |
| Connecticut, | 21 | 3,524 | 6,463,632 | 5,800,692 |
| Delaware, | 4 | 508 | 288,941 | 448,987 |
| Georgia, | 22 | 2,880 | 3,269,652 | 3,232,623 |
| Illinois, | 43 | 3,141 | 5,115,992 | 5,946,737 |
| Indiana, | 5 | 2,032 | 2,405,786 | 2,381,219 |
| Iowa, | 4 | 279 | 420,276 | 325,500 |
| Maine, | 5 | 56 | 128,593 | 78,586 |
| Maryland, | 11 | 1,062 | 929,500 | 1,172,325 |
| Massachusetts, | 65 | 10,287 | 12,477,388 | 14,736,025 |
| Michigan, | 35 | 2,818 | 3,734,803 | 4,029,105 |
| Minnesota, | 10 | 1,200 | 1,978,729 | 2,242,694 |
| New Hampshire, | 21 | 3,223 | 3,529,826 | 4,764,119 |
| New Jersey, | 37 | 2,658 | 3,489,294 | 3,810,241 |
| New York, | 360 | 37,673 | 52,582,240 | 67,130,296 |
| North Carolina, | 62 | 5,361 | 5,164,117 | 5,151,692 |
| Ohio, | 39 | 3,412 | 4,407,562 | 6,433,431 |
| Pennsylvania, | 464 | 40,248 | 38,989,088 | 49,657,506 |
| Rhode Island, | 17 | 1,849 | 2,878,478 | 3,865,792 |
| South Carolina, | 7 | 864 | 755,398 | 655,340 |
| Tennessee, | 22 | 3,229 | 3,054,790 | 3,565,436 |
| Utah, | 11 | 212 | 311,224 | 419,229 |
| Vermont, | 8 | 974 | 1,752,780 | 1,745,670 |
| Virginia, | 11 | 1,780 | 1,093,087 | 2,462,787 |
| Wisconsin, | 61 | 4,659 | 6,183,128 | 7,843,389 |
| All other States, ² | 17 | 1,251 | 1,094,415 | 1,201,136 |

¹ United States, thirteenth census, Vol. VIII., pp. 722, 723.² All other States embrace: Colorado, 1 establishment; Idaho, 1; Kansas, 1; Kentucky, 2; Louisiana, 1; Mississippi, 1; Missouri, 2; Nebraska, 1; Oregon, 1; Texas, 1; Washington, 3; and West Virginia, 2.

Statistics of Manufacture (Hosiery and Knit Goods).

| | CENSUS RETURNS FOR 1909. ¹ | | Statistics of Manu- factures for 1913, Massachu- setts. |
|--|--|---------------------|--|
| | United States. | Massachu- setts. | |
| 1. Number of establishments, | 1,374 | 65 | 65 |
| 2. Capital, | \$163,641,171 | \$12,477,388 | \$14,660,406 |
| 3. Value of products, | \$200,143,527 | \$14,736,025 | \$16,693,510 |
| 4. Value added by manufacture (product less cost of material). | \$89,902,474 | \$7,764,419 | \$7,884,426 |
| 5. Cost of materials used, including fuel and rent of power. | \$110,241,053 | \$6,971,606 | \$8,809,084 |
| 6. Expense (rent, tax, contract, other), | \$13,056,850 | \$945,284 | — ² |
| 7. Salaries, | \$7,691,457 | \$516,073 | — ² |
| 8. Wages, | \$44,740,223 | \$3,854,828 | \$4,813,407 |
| 9. Total cost, | \$175,729,583 | \$12,287,791 | — ² |
| 10. Value of product less total cost, | \$24,413,944 | \$2,449,234 | — ² |
| 11. Employees:— | | | |
| Number of salaried officials and clerks, | 5,721 | 309 | — ² |
| Average number of wage earners employed during the year. | 129,275 | 9,941 | 10,739 |
| Male, 16 years of age and over, December 15, | 37,419 | 4,284 | 2,671 ³ |
| Female, 16 years of age and over, December 15, | 88,183 | 5,549 | 6,758 ³ |
| Female, under 16 years of age, December 15, | 7,892 | 326 | 1,264 ⁴ |

¹ United States, thirteenth census, Vol. VIII., pp. 524, 525, 722, 723.² Not taken by the Massachusetts Bureau of Statistics.³ This is the number of employees eighteen years of age and over, December 13.⁴ This is the number of employees under eighteen years of age, December 13.

*Manufacture of Hosiery and Knit Goods in Massachusetts, 1909-13.*¹

| YEAR. | Estab-lish-ments. | Capital invested. | Value of Stock and Materials used. | Amount of Wages paid during the Year. | Average Yearly Earnings. | WAGE EARNERS EMPLOYED. | | | | | Value of Product. |
|-------|-------------------|-------------------|------------------------------------|---------------------------------------|--------------------------|------------------------|----------|------------------|------------------|--------------|-------------------|
| | | | | | | AVERAGE NUMBER. | | Smallest Number. | Greatest Number. | Both Sexes. | |
| | | | | | | Males. | Females. | | | | |
| 1909, | 58 | \$12,469,238 | \$6,967,499 | \$3,853,151 | -- | -- | 9,935 | 9,620 | 10,392 | \$14,724,119 | |
| 1910, | 55 | 11,450,799 | 7,897,787 | 3,808,277 | \$398.20 | 6,960 | 9,612 | 8,471 | 10,454 | 14,237,717 | |
| 1911, | 56 | 12,225,795 | 8,014,351 | 3,808,334 | 395.10 | 9,829 | 8,810 | 9,639 | 10,826 | 14,682,459 | |
| 1912, | 62 | 13,805,801 | 8,438,386 | 4,383,703 | 432.57 | 9,047 | 7,087 | 8,976 | 10,956 | 16,067,694 | |
| 1913, | 65 | 14,660,406 | 8,809,094 | 4,813,407 | 448.22 | 9,932 | 7,807 | 8,935 | 12,099 | 16,663,510 | |

¹ Massachusetts Statistics of Manufactures, 1909-13.

-- No figures given.

METHOD AND SCOPE OF THE INVESTIGATION.

The field work for the study of the wages of women in the hosiery and knit goods industry was carried on in the months of September, October and November, 1915. The study included 27 establishments situated in 15 cities and towns, and selected in such a manner as to be as nearly representative as possible of the several branches of the industry and of the different localities in which it is centralized. Agents of the Commission covered almost all of the important knitting centers of the State, since in addition to the above they visited 19 other establishments. Of these latter firms it was found that 9 had gone out of business or had changed hands within the last year, 5 did not at present manufacture knit goods, 3 employed only one or two women, while the remainder did not keep their pay records in such a form as to be available for the purposes of the Commission.

In each of the 27 establishments studied a transcript of the pay-roll records for each female employee was taken for a period covering the fifty-two weeks preceding the date of the initiation of the investigation. In the case of 18 factories the pay-roll data included the record of the number of hours worked each week. In as many cases as possible schedules were also filled out by the women workers themselves, in order that the Commission might have available such information as age, marital condition, living arrangements and length of experience. An inspection of the premises was also made for the purpose of studying the occupations. The results of the analysis of the schedule material will be found in the section entitled "Analysis of the Wage Situation."

In accordance with the duties of the Commission as prescribed by statute the inquiry has been limited to ascertaining wages and also, where possible, rates of payment and hours of labor for the various occupations, with such other matters as are most intimately connected with the subject of wages. This procedure has necessitated the omission of many subjects which might have proved both interesting

and valuable as matters of public knowledge in connection with the wage situation. For example, the matters of overtime, sanitation, accidents and more detailed information as to the living arrangements and expenses of the women employees have a definite bearing on the matter of wages in any given employment. Moreover, certain of these matters are under the jurisdiction of other boards and commissions in this State, and information concerning them appears from those sources from time to time. Consequently, the material gathered by the Commission is limited in scope and comprises only the data which in the experience of the Commission have proved to be most pertinent and useful in the attempt to improve the wage situation.

THE PROCESS OF MANUFACTURE.

Winding. — The raw material ordinarily comes to the knitting mill in the form of silk, woolen or cotton yarn, wound in skeins or on bobbins. Since one of the most important requirements in the production of knit goods is the free and even presentation of the yarn to the knitting machine, it is usually found necessary to rewind it upon larger cone-shaped spools known as winder-bobbins. The winding machine is equipped with two rows of spindles which revolve automatically, one composed of the cops or skeins which are to be unwound and the other of the cones which are later to be transferred to the knitting machine. Since these machines are practically automatic, the work of the winders, who are usually women, requires but little skill, and consists in replacing empty cops and filled cones and in watching for breaks in the yarn and tying the ends together.

Knitting. — Two principal types of knitting machines are in use, — the “flat-bed” and the “circular.” The flat-bed machine takes its name from the fact that the frame is flat and the fabric produced a flat web which must be seamed to be finished. These machines are now fitted with automatic devices for “fashioning,” that is, narrowing and widening the web in order to produce a shaped fabric. This type of machine, the largest of which knit from 18 to 20 stockings at a time, is used mainly for the better grades of hosiery and

underwear, the articles produced being termed "full-fashioned." Goods made on the circular machines, which knit a tubular web, are less expensive to make up, but they are usually inferior in shape and elasticity to the full-fashioned product. The process of machine knitting is in principle similar to that of hand knitting or crocheting; small metal needles automatically loop the yarn so as to produce a mesh of the desired size, elasticity and texture. In the manufacture of women's seamless hose the entire leg and foot are usually knit in one piece. Where the stocking has a ribbed top, as in the case of men's and children's hose, the ribbed portion is knit first upon a machine equipped with a double set of needles, one of which forms the face and the other the back of the webbing. The fabric is then cut into the desired lengths by hand or by a machine operated by a foot or hand lever, the operators in charge of this work being known as rib cutters. The top is then transferred stitch by stitch onto the needles of the footing machine, which knits the rest of the stocking directly onto the ribbed top. The leg and foot are thus knit in one seamless piece except that a small opening across the toe remains to be joined in another operation known as looping. On the machines of the flat-bed or Cotton type, upon which all the finer grades of hosiery are knit, the fabric is fashioned by the process of transferring the loops from the end needles a certain number of stitches towards or away from the center of the web, according to whether the goods are to be narrowed or widened. The leg is knit first from the top or widest part to the ankle, and then transferred to another machine which knits the foot web. The process of transferring is in some cases performed by a special group of operatives, but more often it is undertaken by the knitters who are in charge of the footing machines. The tubular webbing used almost exclusively in the manufacture of underwear and sweaters is produced on circular frames similar in operation to those used in the production of seamless hosiery. Full-fashioned machines are used for making sleeves and other shaped pieces for high-grade underwear. Both men and women operate circular and flat-bed machines, but in

general the larger flat-bed hosiery frames are run by men while the circular machines, with the exception of the large ones used in the production of sweaters, are usually in charge of women. These women watch from three to six machines, seeing that the bobbins are full of thread, that broken needles are replaced, and the thread fed evenly into the machine. Knitters, like winders, are obliged to stand or walk about while engaged in their work.

Looping. — Looping is a process by which edges are joined together in a seam which is almost imperceptible. Although sometimes used in the manufacture of high-grade underwear, for such purposes as making the shoulder seam or attaching the cuff to the sleeve, it is a process which plays a far more important part in the hosiery mill, since it is the sole method used in closing up the opening at the toe of the stocking. In full-fashioned hosiery the heel must also be looped. The looper consists of a continuously revolving metal disc, equipped with a row of needles around the outer edge. The two edges to be joined together are fitted stitch by stitch over each other upon the points of the disc, which is large enough to hold about a dozen stockings at a time. As the disc revolves, the two fabrics are joined together by the thread carried by a needle which passes in turn through each pair of loops, a knife trims the raw edges above the seam, and a brush cleans the seam smooth. As the stocking is brought around again before the operator she cuts the thread uniting it to its neighbor, and the finished article drops into a basket, leaving space for the adjustment of a new stocking. Looping is the most skilled occupation in which women are employed in stocking factories. The operator sits at her work, which is located in the lightest and often the most comfortable part of the factory, but which under the best conditions involves a considerable strain upon the eyes.

Dyeing. — Full-fashioned hosiery is usually dyed in the yarn, while cheaper grades are knit "in the grey," and are dyed after the completion of the looping process. The bleaching is done with peroxide or by an electrical process, colored stockings being washed and bleached before they are

dyed. They are then dried either by steam or in an extractor. The webbing used in the manufacture of underwear goes direct from the knitters to the bleaching room. After the bleaching process it is dried by being run over steam-heated tubes. Men only are employed in the occupations of dyeing and bleaching.

Boarding. — In order to shape hosiery and certain kinds of underwear the articles are boarded, that is, drawn while damp over a shaped board and dried in a hot oven. Boarding is hot and heavy work and is usually done by men.

Cutting. — After the knit goods come from the bleaching rooms they go to the hands of the cutters. The material to be used in the manufacturing of underwear is piled in layers, and with the use of a pattern the garment is cut out by shears or a power-driven cutting machine. As a rule, men guide the power machines, although some women are employed at this work as well as at the lighter processes of cutting by hand and in "rib-cutting," described above.

Machine Seaming and Finishing. — The seaming and finishing processes on underwear and full-fashioned hosiery include a number of varied operations, each usually performed by a separate worker who operates a machine especially designed for the work in hand. For full-fashioned hosiery the process consists in seaming the foot and back of the leg. For underwear the sides must be seamed, and "reseamed" or overcast, sleeves and gussets set in, and cuffs stitched on. Finishing processes include finishing necks and fronts, stitching on straps, tapes, bands and facings, making buttonholes and eyelets, and putting on buttons. The power-driven sewing machines used for these processes are always operated by women, whose work is similar to that of machine operators in other garment factories.

Hand Finishing and Embroidery. — On the highest priced goods many of the finishing and decorating processes are performed by operators who sew, embroider or crochet by hand. In the manufacture of sweaters the sleeve is sometimes crocheted into the body, while the buttons and hooks are sewn on and the collar and cuffs overcast by hand.

Taping. — Another unskilled hand process is the running of tapes into the crocheted edging at the neck and armholes of women's and children's underwear.

Mending. — The first inspection of both hosiery and underwear is usually made by menders, who go over the goods for the purpose of locating and repairing any damaged spots which can be mended.

Inspecting. — After passing through the hands of the menders the articles are usually reinspected, sometimes by the same workers, who fold them preparatory to pressing.

Pressing. — Articles to be pressed are laid in piles between sheets of pasteboard and placed in a hand or power press in order to give them a smooth and finished appearance. Both men and women are engaged in this occupation.

Folding and Boxing. — After being pressed the goods go to the final group of operatives, — women who make a last examination of each article as it is folded and packed with others for shipment.

Miscellaneous processes in connection with the manufacture of hosiery and knit goods include *turning*, or jerking right side out the stockings as they come from the knitting machine; *marking*, or *stamping* the size, number or trade-mark upon the finished article; *marking* the location of buttons; *buttoning* shirts; *pairing*, or mating stockings in sets of two of a kind; *giving out work*; *measuring threads*; and *general floor work*.

METHOD OF TREATING WAGE MATERIAL.

In the preparation of the material for tabulation all records of persons who appeared on the pay roll for less than four weeks out of the fifty-two under consideration were thrown out. This was done in order that the conclusions reached might apply only to workers who could legitimately be considered a part of the normal working force of the industry. Records for forewomen, clerical workers and scrub women were also excluded.

In computing weekly earnings and hours worked each

week for individual workers the procedure for each individual was as follows: the sum of all payments made during the fifty-two-week period — that is, the girl's total income from her work for the year — was found. This sum was divided by the number of weeks during which she was actually at work, as indicated by the number of weekly payments made to her. Where the weekly pay roll showed a record of time worked for which no wages were paid, the week in question has been counted as a week actually worked. In this way the average weekly earnings of each employee for the time she was at work in the occupation under consideration were ascertained. A corresponding procedure was adopted in treating hours of work. The number of hours recorded during the fifty-two-week period was totaled, and this sum divided by the number of weeks for which hours were recorded. In cases where hours were given for only a small and unrepresentative portion of the total number of weeks worked, the item of hours was excluded from tabulation as not accurately indicating the actual weekly average of hours worked throughout the entire period of employment. It should be noted that the amounts paid were not always the equal of a full week's work. Since the wage records rarely show the cause of short hours and small payments, it is impossible to avoid a slight inaccuracy in the analysis of earnings, due to the fact that in some cases girls enter and leave the factory in the middle of a week, and a few of these may therefore appear to receive a lower average weekly wage than they actually do. This misinterpretation is unavoidable, since the Commission has made it a rule to present the pay-roll figures as found, without omissions or additions due to interpretations of its own.

ANALYSIS OF THE WAGE SITUATION.

Table 1, (a) and (b), shows the weekly earnings, classified according to occupations, of the 3,460 women for whom wage data were obtained. Of the total number two-fifths (40.7 per cent.) earned less than \$6 a week, while about three-quarters (74.3 per cent.) earned less than \$8 a week. Two-thirds (65.7 per cent.) fall into the groups earning between \$5

and \$8. The lowest paid occupations, rated according to the percentage of those earning under \$6, are rib-cutting and taping, with 75 per cent. and 73.1 per cent., respectively, both of them being unskilled occupations in which only a small number of women are engaged. Of the occupations employing large numbers of women, those for which the lowest weekly earnings are recorded are knitting, winding and hand finishing, in each of which groups almost half of the workers received less than \$6. The most highly paid of the specified occupations, rated according to the percentage earning \$8 or more, are cutting (50 per cent.), machine seaming and finishing (34.3 per cent.) and folding and boxing (31.8 per cent.). The largest occupational class, the machine operators, comprises a number of distinct groups of workers performing dissimilar operations which require different degrees of skill. These had to be grouped together because of the fact that in a number of establishments all machine operators are classed together as "stitchers" without further specification. Table 1 (c) shows the 427 machine operators whose occupations are further specified grouped, according to average weekly earnings, in the two main divisions of seamers and finishers. Wages in the two groups parallel each other closely, although there are more high-paid and fewer low-paid persons employed in the finishing operations.

Out of the total number of 3,460 women whose records were tabulated, 2,987, or 86.3 per cent., were pieceworkers or time workers for whom only hourly rates were available. Persons paid according to time rates are in this industry restricted to a few unrepresentative occupations, and for this reason a table showing the weekly rates of payment for the small number for whom such data were available has not been prepared, since it would be in no way comparable with the tables showing weekly earnings for the total number of women employed in the industry.

According to Table 2, which shows the total income received by each worker for the time employed during the fifty-two-week period in the establishments investigated, it will be seen that the largest single group, consisting of 944 individuals, or 27.3 per cent. of the total number, earned less

than \$100 a year, while 1,800, or 52 per cent., earned less than \$250. Thus, computed on a fifty-two-week basis, over a quarter earned an average wage of less than \$2 a week, while over half earned less than \$5. Only 583, or 16.8 per cent., earned over \$400, \$416 being the annual income of a worker receiving a weekly wage of \$8 who has steady employment. Since this study has been limited to the pay-roll data as presented by individual establishments in the knit goods industry, and no information is available regarding the complete industrial record for the individual workers for the fifty-two-week period, it is not possible to state to what extent this condition of low annual earnings is due to employment in other establishments or industries, and to what extent to actual unemployment. Undoubtedly a considerable amount, especially in the smaller towns where industrial openings are few, is due to the latter cause. The question of how much of the unemployment is voluntary with the workers, and how much due to their being laid off during dull seasons and to the lack of opportunity for employment, is another matter concerning which the Commission has no accurate information.

An analysis of the weekly wages paid by different establishments is presented in Table 3, which shows the wide divergence in actual earnings, not only in different branches of the industry, but also between individual establishments manufacturing the same general lines and grades of goods. The firms manufacturing underwear in general paid considerably higher wages than those producing hosiery, sweaters and miscellaneous products, only 26 per cent. of the women employed in underwear factories receiving less than \$6 a week, as against 48.4 and 49.4 per cent. in the two other groups, respectively, and 40.7 per cent. in the industry as a whole. Among the underwear firms the number receiving less than \$6 a week varies from 6.2 to 60.2 per cent., while the number receiving over \$9 varies from 2.3 to 65.4 per cent. It will be noted that similar extreme variations exist in the case of the hosiery concerns ranging from establishment No. 5, where 73.2 per cent. received under \$6, to establishment No. 1, where the corresponding figure is only

27.6 per cent. The firms manufacturing sweaters and miscellaneous products have still lower wages, rated according to the number receiving less than \$6, and also show a wide variation between individual firms, the number receiving less than \$6 ranging from 88.9 and 90 per cent. to 15 and 17.9 per cent. These differences in the wage scales of the individual factories can be accounted for in part by the fact that the industry is so far subdivided that each individual establishment makes only one special line of goods, and is therefore affected by trade and labor conditions which do not necessarily influence other firms in the same branch of the industry even if situated in the same locality.

One of the most important causes of the variations in wages paid in different establishments is revealed by Table 4, which presents the data regarding the average number of hours worked per week by women employed in 18 of the 27 establishments studied. This table shows that in general the establishments in each group having the largest number of female employees who receive an average wage of under \$6 are recorded as having the shortest average running time, whereas the establishments paying the highest wages work their employees for the longest number of hours. Among the underwear firms, for example, in establishment No. 8, which is recorded as paying the lowest wages, 91.9 per cent. of the employees worked an average of less than thirty-eight hours per week, while in the most highly paid establishments for which hourly records were available it will be seen that no employees, or only a very small percentage, worked less than thirty-eight hours. The same is true of the hosiery firms, thereby explaining the wide divergence between the average weekly earnings in firms known to manufacture almost exactly similar lines of goods. However, while differences are so great between individual firms, the average running time for the three main divisions of the industry present far less variation from each other and from the figures for the industry as a whole.

The relation between low wages and short hours of labor is further indicated by Table 5, (a) and (b), which shows the workers in the different wage groups classified according to

the average number of hours worked per week. Data regarding hours of labor are of especial value in the study of this industry because of the unusually large percentage of workers — over two-thirds of the total number studied — for whom records of hours were available.

According to Tables 6 and 7, which analyze the fluctuation of employment according to occupation and establishment, 7.5 per cent. of the total number of women included in the study found employment for the whole year, 37.5 worked eleven months, while over half (51.9 per cent.) were employed for nine months. The variation in steadiness of employment between the different occupations is not strikingly marked, cutting and mending ranking highest, boarding, taping, pressing and winding ranking lowest, while those occupations most characteristic of the industry, — knitting, looping and machine operating, — run close to the average for the industry as a whole. Table 7 shows that in the period under consideration the underwear factories provided the most steady work for their employees, 43.8 per cent. of whom worked over eleven months, and 61.8 per cent. over nine months. The figures in the hosiery firms closely approximate those for the industry as a whole, while the sweater and miscellaneous establishments, which produce goods of a more seasonal character than either of the two other groups, afford steady employment to a much smaller proportion of their employees. There is a considerable variation between different establishments, and in certain instances it is possible, as in the case of establishments Nos. 7, 13, 16, 22 and 25, to trace a relation between wages and duration of employment. In other cases, however, such as that of most of the stocking firms, steadiness of employment seems to bear little relation to the wage factor.

Diagram I shows in graphic form the per cent. of the total number of women included in the investigation who were employed in each week of the year in the three branches of the industry. The curve shows no marked seasonal fluctuation for the industry as a whole, the general depression in the month of July indicating the vacation period rather than slack business. Steadiness of employment is less marked in the manufacture of sweaters and miscellaneous goods than in

the other lines, a fact which can be explained by the greater seasonal demand of this branch of the business, as well as by the fact that the firms manufacturing these lines are in most cases smaller and less well organized than the hosiery and underwear establishments.

We see from Table 8, (a) and (b), that this industry follows the general tendency to employ women between the ages of sixteen and thirty-five. Of the 1,680 women for whom information regarding wages was available, 1,390, or 82.7 per cent., were at this period of life; 832, or 49.5 per cent., being between eighteen and twenty-five years old. The figures indicate a general tendency for earning capacity to increase with years up to the age of forty.

Of those persons for whom the Commission secured data regarding living conditions (Tables 10 and 11), 178, or 10.6 per cent., lived away from home, that is, in lodging or boarding houses. The rest either lived at home or with relatives, many of them contributing to the household expenses, and some undoubtedly partially or wholly responsible for the support of other members of their family as well as of themselves. Table 10 shows that 33.7 per cent. of the girls living at home earn under \$6, while only 24.5 per cent. of those away from home fall in these wage groups.

SUMMARY OF ANALYSIS.

A summary of the results of the investigation into the wages of women in the hosiery and knit goods industry shows that of the total number employed during the fifty-two-week period included in the study, 40.7 per cent. earned less than \$6 a week and 27.3 per cent. earned less than \$100 a year. The records show a low average for hours of employment, 56.7 per cent. working less than forty-two hours per week. This situation is doubtless due somewhat to the unsettled trade conditions resulting from the European war. That this industry is not markedly seasonal in character is shown by the fact that 51.9 per cent. have employment for over nine months of the year. Out of the total number for whom data regarding living conditions were obtained, 10.6 per cent. were recorded as living away from home.

TABLE 1 (a). — Average Weekly Earnings: by Occupations.

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS EARNING — | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|------------|--------------------|------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|---------------|------------|---------|-----------|
| | UNDER \$3. | | \$3 AND UNDER \$4. | | \$4 AND UNDER \$5. | | \$5 AND UNDER \$6. | | \$6 AND UNDER \$7. | | \$7 AND UNDER \$8. | | \$8 AND UNDER \$9. | | \$9 AND OVER. | | TOTAL. | |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. |
| Machine sewing and finishing, | 32 | 4.1 | 37 | 4.7 | 107 | 13.7 | 132 | 16.9 | 119 | 15.2 | 121 | 15.5 | 147 | 18.8 | 782 | 100 | | |
| Knitting, | 43 | 6.1 | 79 | 11.2 | 125 | 17.8 | 155 | 22.1 | 131 | 18.7 | 59 | 8.4 | 18 | 2.6 | 702 | 100 | | |
| Looping and transferring, | 15 | 3.9 | 27 | 7.1 | 65 | 17.1 | 70 | 18.4 | 68 | 17.9 | 54 | 14.2 | 30 | 7.9 | 380 | 100 | | |
| Winding, | 7 | 2.5 | 28 | 10.0 | 60 | 21.3 | 75 | 26.7 | 29 | 10.3 | 25 | 8.9 | 18 | 6.4 | 281 | 100 | | |
| Inspecting, | 14 | 8.5 | 16 | 9.8 | 21 | 12.8 | 29 | 17.7 | 26 | 15.9 | 21 | 12.8 | 24 | 14.6 | 164 | 100 | | |
| Mending, | 1 | 1.7 | 7 | 5.2 | 31 | 23.0 | 18 | 13.3 | 26 | 19.3 | 9 | 6.6 | 26 | 19.3 | 135 | 100 | | |
| Hand finishing and embroidery, | 4 | 3.1 | 9 | 7.0 | 30 | 23.4 | 22 | 17.2 | 17 | 13.3 | 13 | 10.2 | 15 | 11.7 | 128 | 100 | | |
| Folding and boxing, | 2 | 1.8 | 8 | 7.3 | 15 | 13.6 | 27 | 24.5 | 17 | 15.5 | 17 | 14.6 | 18 | 16.4 | 110 | 100 | | |
| Cutting, | — | — | 6 | 5.4 | 4 | 8.3 | 10 | 20.8 | 6 | 12.5 | 7 | 14.6 | 4 | 10.8 | 48 | 100 | | |
| Pressing, | — | — | 2 | 2.1 | 3 | 6.4 | 7 | 18.9 | 3 | 13.5 | 6 | 13.5 | 1 | 3.4 | 37 | 100 | | |
| Boarding, | — | — | 1 | 5.4 | 12 | 32.5 | 8 | 27.6 | 1 | 3.9 | 1 | 11.5 | 1 | 11.5 | 29 | 100 | | |
| Taping, | 1 | 3.9 | 3 | 10.4 | 6 | 23.1 | — | — | 2 | 8.3 | — | — | — | — | 26 | 100 | | |
| Rib-cutting, | 2 | 8.3 | 7 | 29.2 | 4 | 33.3 | — | — | 2 | 8.3 | — | — | — | — | 24 | 100 | | |
| Miscellaneous, | 20 | 6.3 | 37 | 11.7 | 65 | 20.5 | 51 | 16.1 | 41 | 13.9 | 34 | 10.7 | 11 | 3.5 | 317 | 100 | | |
| Occupation not specified, | 4 | 1.3 | 1 | 3.3 | 26 | 8.8 | 25 | 8.4 | 40 | 13.5 | 64 | 18.2 | 133 | 44.8 | 287 | 100 | | |
| Total, | 145 | 4.3 | 263 | 7.6 | 579 | 16.7 | 633 | 18.3 | 531 | 15.4 | 423 | 12.3 | 465 | 13.4 | 3,460 | 100 | | |

TABLE 1 (c). — Average Weekly Earnings of Machine Seamers and Finishers.
In All Branches of the Industry (Cumulative).

| OCCUPATIONS. | NUMBER AND PER CENT. OF WORKERS EARNING — | | | | | | | | | | | | | | | | | |
|---|---|------------|------------|------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|---------------|-------------|--|--|
| | UNDER \$3. | | UNDER \$4. | | UNDER \$5. | | UNDER \$6. | | UNDER \$7. | | UNDER \$8. | | UNDER \$9. | | \$9 AND OVER. | | | |
| | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | Num-ber. | Per Cent. | | |
| Machine seaming, | 10 | 6.0 | 16 | 9.6 | 35 | 21.1 | 53 | 31.9 | 85 | 51.2 | 115 | 69.3 | 138 | 83.1 | 23 | 16.9 | | |
| Finishing, | 10 | 3.8 | 16 | 6.1 | 37 | 14.2 | 73 | 28.0 | 121 | 46.4 | 170 | 65.1 | 206 | 78.9 | 55 | 21.1 | | |
| Total, | 20 | 4.7 | 32 | 7.5 | 72 | 15.9 | 126 | 29.5 | 206 | 45.2 | 285 | 66.7 | 344 | 80.6 | 83 | 19.4 | | |
| <i>Underwear Firms Only (Cumulative).</i> | | | | | | | | | | | | | | | | | | |
| Machine seaming, | 6 | 4.3 | 9 | 6.4 | 26 | 18.6 | 40 | 28.6 | 65 | 46.4 | 93 | 66.4 | 115 | 82.1 | 25 | 17.9 | | |
| Finishing, | 9 | 3.8 | 14 | 5.9 | 33 | 13.9 | 64 | 26.9 | 105 | 44.1 | 150 | 63.0 | 183 | 76.9 | 55 | 23.1 | | |
| Total, | 15 | 4.0 | 23 | 6.1 | 59 | 15.6 | 104 | 27.5 | 170 | 45.0 | 243 | 64.3 | 298 | 73.3 | 80 | 21.2 | | |

TABLE 2. — Annual Earnings: by Occupations.

| OCCUPATIONS. | NUMBER OF WORKERS WITH ANNUAL EARNINGS OF — | | | | | | | | | | Total. |
|--------------------------------|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|--------------|
| | Under \$100. | \$100 and under \$150. | \$150 and under \$200. | \$200 and under \$250. | \$250 and under \$300. | \$300 and under \$350. | \$350 and under \$400. | \$400 and under \$450. | \$450 and under \$500. | \$500 and over. | |
| Machine seaming and finishing, | 212 | 67 | 49 | 52 | 71 | 83 | 87 | 64 | 41 | 56 | 762 |
| Knitting, | 187 | 57 | 73 | 74 | 90 | 100 | 82 | 33 | 16 | 1 | 702 |
| Looping and transferring, | 100 | 33 | 26 | 21 | 52 | 59 | 36 | 24 | 13 | 7 | 330 |
| Winding, | 94 | 32 | 37 | 22 | 23 | 23 | 15 | 17 | 6 | 7 | 281 |
| Inspecting, | 55 | 14 | 10 | 10 | 11 | 12 | 17 | 16 | 2 | 0 | 164 |
| Mending, | 29 | 12 | 11 | 11 | 13 | 17 | 17 | 12 | 8 | 0 | 156 |
| Hand finishing and embroidery, | 41 | 15 | 10 | 13 | 16 | 16 | 13 | 19 | 2 | 4 | 123 |
| Folding and boxing, | 23 | 11 | 10 | 3 | 8 | 10 | 9 | 11 | 5 | 0 | 110 |
| Cutting, | 8 | 5 | 4 | 4 | 2 | 1 | 5 | 8 | 4 | 7 | 49 |
| Pressing, | 10 | 8 | 2 | 2 | 3 | 5 | 3 | 1 | 2 | 1 | 37 |
| Boarding, | 14 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 29 |
| Taping, | 14 | 1 | — | 4 | — | 4 | 2 | 1 | 2 | — | 26 |
| Rib-cutting | 8 | 1 | 1 | 3 | 7 | 1 | 1 | — | — | — | 24 |
| Miscellaneous, | 114 | 24 | 25 | 31 | 38 | 25 | 27 | 20 | 9 | — | 317 |
| Occupation not specified, | 35 | 21 | 11 | 14 | 21 | 20 | 29 | 50 | 52 | 44 | 297 |
| Total, | 944 | 303 | 266 | 287 | 356 | 370 | 351 | 377 | 154 | 153 | 3,400 |

TABLE 3.—Average Weekly Earnings: by Establishments
(Cumulative).*Hosiery.*

| ESTABLISHMENTS. | PER CENT. OF WORKERS EARNING — | | | | | | | |
|-------------------------|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| | Under \$3.. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| No. 1, | 3.4 | 8.9 | 14.7 | 27.6 | 47.4 | 71.2 | 92.8 | 7.2 |
| No. 2, | 8.1 | 16.8 | 35.1 | 57.0 | 75.1 | 89.9 | 96.3 | 3.7 |
| No. 3, | 2.6 | 9.7 | 25.3 | 56.2 | 82.1 | 95.5 | 99.4 | .6 |
| No. 4, | 3.1 | 8.7 | 19.3 | 35.4 | 49.6 | 67.3 | 80.3 | 19.7 |
| No. 5, | 9.2 | 33.5 | 56.9 | 73.2 | 92.1 | 98.7 | 100.0 | — |
| No. 6, | 2.0 | 15.2 | 29.3 | 49.5 | 66.7 | 84.8 | 96.0 | 4.0 |
| Total, | 5.1 | 14.6 | 23.3 | 43.4 | 67.3 | 84.0 | 94.1 | 5.9 |

Underwear.

| | | | | | | | | |
|-------------------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| No. 7, | 1.3 | 1.7 | 6.4 | 15.2 | 23.6 | 37.0 | 55.2 | 44.8 |
| No. 8, | 9.1 | 21.0 | 38.6 | 60.2 | 81.3 | 93.2 | 97.7 | 2.3 |
| No. 9, | — | 2.0 | 5.2 | 20.9 | 37.3 | 60.1 | 79.7 | 20.3 |
| No. 10, | 1.6 | 8.1 | 20.3 | 29.3 | 47.2 | 63.4 | 82.9 | 17.1 |
| No. 11, | 1.0 | 2.9 | 9.6 | 20.2 | 50.0 | 70.2 | 85.6 | 14.4 |
| No. 12, | — | 2.2 | 8.8 | 22.0 | 33.0 | 54.9 | 78.0 | 22.0 |
| No. 13, | — | 1.2 | 4.9 | 6.2 | 9.9 | 19.8 | 34.6 | 65.4 |
| No. 14, | 3.1 | 7.7 | 20.0 | 40.0 | 64.6 | 76.9 | 87.7 | 12.3 |
| No. 15, | — | 5.8 | 13.5 | 25.0 | 34.6 | 53.8 | 75.0 | 25.0 |
| No. 16, | — | 2.1 | 6.4 | 10.6 | 27.7 | 44.7 | 66.0 | 34.0 |
| No. 17, | 7.7 | 11.5 | 19.2 | 26.9 | 42.3 | 65.4 | 73.1 | 26.9 |
| Total, | 2.2 | 6.0 | 14.0 | 26.0 | 41.3 | 57.5 | 73.6 | 26.4 |

Sweaters, Athletic Goods and Miscellaneous Products.

| | | | | | | | | |
|---|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| No. 18, | 1.4 | 9.4 | 25.4 | 45.7 | 68.8 | 82.6 | 94.2 | 5.8 |
| No. 19, | 3.9 | 16.3 | 31.7 | 47.1 | 63.5 | 76.0 | 89.4 | 10.6 |
| No. 20, | 11.3 | 26.3 | 48.8 | 71.3 | 87.5 | 93.8 | 98.7 | 1.3 |
| No. 21, | — | 1.5 | 4.8 | 25.4 | 59.7 | 74.6 | 85.1 | 14.9 |
| No. 22, | 33.3 | 62.2 | 86.7 | 88.9 | 95.6 | 97.8 | 97.8 | 2.2 |
| No. 23, | — | — | — | 17.9 | 50.0 | 64.3 | 78.6 | 21.4 |
| No. 24, | — | 10.0 | 55.0 | 90.0 | 100.0 | 100.0 | 100.0 | — |
| No. 25, | — | — | 5.0 | 15.0 | 80.0 | 85.0 | 90.0 | 10.0 |
| No. 26, | 12.5 | 12.5 | 12.5 | 31.3 | 37.5 | 50.0 | 75.0 | 25.0 |
| No. 27, | — | — | 16.7 | 33.3 | 50.0 | 50.0 | 100.0 | — |
| Total, | 6.1 | 16.0 | 31.3 | 49.4 | 71.2 | 81.7 | 91.3 | 8.2 |
| Total of all estab- lishments. | 4.2 | 11.3 | 24.0 | 40.7 | 59.0 | 74.3 | 86.6 | 13.4 |

TABLE 4.—Hours of Labor: by Establishments (Cumulative).

Hosiery.

| ESTABLISHMENTS. | PER CENT. OF WORKERS WORKING— | | | | | | | |
|-------------------------|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| | Less than 30 Hours. | Less than 34 Hours. | Less than 38 Hours. | Less than 42 Hours. | Less than 46 Hours. | Less than 50 Hours. | Less than 54 Hours. | 54 Hours and over. |
| No. 1, | 2.4 | 3.6 | 8.5 | 19.6 | 50.8 | 85.7 | 100.0 | - |
| No. 2, | 2.5 | 3.7 | 25.7 | 79.0 | 93.3 | 97.0 | 100.0 | - |
| No. 3, | 5.2 | 19.9 | 45.6 | 87.3 | 97.7 | 100.0 | 100.0 | - |
| No. 4, | 2.0 | 11.2 | 31.9 | 57.8 | 82.1 | 98.0 | 100.0 | - |
| No. 6, | 5.1 | 14.1 | 23.2 | 54.5 | 75.8 | 92.9 | 100.0 | - |
| Total, | 3.1 | 9.0 | 25.9 | 58.8 | 79.2 | 94.4 | 100.0 | - |

Underwear.

| | | | | | | | | |
|-------------------------|------------|-------------|-------------|-------------|-------------|-------------|--------------|----------|
| No. 7, | .3 | 3.1 | 9.2 | 55.3 | 91.9 | 97.6 | 100.0 | - |
| No. 8, | 34.7 | 68.2 | 91.9 | 98.3 | 100.0 | 100.0 | 100.0 | - |
| No. 10, | .8 | 1.6 | 3.3 | 13.0 | 37.4 | 87.8 | 100.0 | - |
| No. 11, | - | - | - | 16.1 | 25.8 | 83.9 | 100.0 | - |
| No. 12, | - | - | - | 13.3 | 33.3 | 66.7 | 100.0 | - |
| No. 14, | 7.1 | 7.1 | 7.1 | 35.7 | 78.6 | 100.0 | 100.0 | - |
| No. 16, | - | - | - | 2.1 | 12.8 | 78.7 | 100.0 | - |
| No. 17, | 20.0 | 20.0 | 48.0 | 76.0 | 100.0 | 100.0 | 100.0 | - |
| Total, | 9.4 | 18.7 | 28.1 | 52.7 | 75.4 | 94.2 | 100.0 | - |

Sweaters, Athletic Goods and Miscellaneous Products.

| | | | | | | | | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| No. 20, | 16.7 | 28.2 | 55.1 | 83.3 | 100.0 | 100.0 | 100.0 | - |
| No. 21, | 2.8 | 2.8 | 2.8 | 5.6 | 13.9 | 52.8 | 94.4 | 5.6 |
| No. 23, | - | - | 7.7 | 15.4 | 53.8 | 92.3 | 100.0 | - |
| No. 24, | - | - | 14.3 | 71.4 | 100.0 | 100.0 | 100.0 | - |
| No. 27, | 16.7 | 16.7 | 33.3 | 33.3 | 33.3 | 83.3 | 100.0 | - |
| Total, | 10.7 | 17.1 | 34.3 | 54.3 | 70.7 | 86.4 | 98.6 | 1.4 |
| Total of all establishments. | 5.5 | 12.5 | 27.1 | 56.7 | 77.5 | 93.3 | 99.9 | .1 |

NOTE.—Data concerning hours were not available in 9 establishments.

TABLE 5 (a).—Hours of Labor and Average Weekly Earnings.

| AVERAGE HOURS PER WEEK. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|--------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| Less than 30, . . . | 18 | 23 | 28 | 29 | 15 | 11 | 3 | 2 | 129 |
| 30 and less than 34, . . . | 10 | 21 | 27 | 39 | 37 | 17 | 9 | 3 | 163 |
| 34 and less than 38, . . . | 35 | 31 | 66 | 67 | 61 | 41 | 18 | 22 | 341 |
| 38 and less than 42, . . . | 19 | 44 | 81 | 145 | 128 | 117 | 68 | 89 | 691 |
| 42 and less than 46, . . . | 8 | 16 | 38 | 67 | 107 | 76 | 89 | 87 | 488 |
| 46 and less than 50, . . . | 2 | 12 | 25 | 60 | 71 | 76 | 72 | 63 | 381 |
| 50 and less than 54, . . . | 2 | 7 | 12 | 19 | 26 | 34 | 25 | 17 | 142 |
| 54 and over, . . . | — | — | — | — | 1 | 1 | — | — | 2 |
| Total, . . . | 94 | 154 | 277 | 426 | 446 | 373 | 284 | 283 | 2,337 |

NOTE.— Data concerning hours were not available for 1,123 workers.

TABLE 5 (b).—Hours of Labor and Average Weekly Earnings (Cumulative).

| AVERAGE HOURS PER WEEK. | PER CENT. OF WORKERS EARNING — | | | | | | | |
|----------------------------|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| Less than 30, . . . | 14.0 | 31.8 | 53.5 | 76.0 | 87.6 | 96.1 | 98.4 | 1.6 |
| 30 and less than 34, . . . | 6.1 | 19.0 | 35.6 | 59.5 | 82.2 | 92.6 | 98.2 | 1.8 |
| 34 and less than 38, . . . | 10.3 | 19.4 | 38.7 | 58.4 | 76.2 | 88.3 | 93.5 | 6.5 |
| 38 and less than 42, . . . | 2.7 | 9.1 | 20.8 | 41.8 | 60.3 | 77.3 | 87.1 | 12.9 |
| 42 and less than 46, . . . | 1.6 | 4.9 | 12.7 | 26.4 | 48.4 | 63.9 | 82.2 | 17.8 |
| 46 and less than 50, . . . | .5 | 3.7 | 10.2 | 26.0 | 44.6 | 64.6 | 83.5 | 16.5 |
| 50 and less than 54, . . . | 1.4 | 6.3 | 14.8 | 28.2 | 46.5 | 70.4 | 88.0 | 12.0 |
| 54 and over, . . . | — | — | — | — | 50.0 | 100.0 | 100.0 | — |
| Total, . . . | 4.0 | 10.6 | 22.5 | 40.7 | 59.8 | 75.7 | 87.9 | 12.1 |

NOTE.— Data concerning hours were not available for 1,123 workers.

TABLE 6. — *Fluctuation of Employment among 3,460 Workers: by Occupations.*

| OCCUPATIONS. | PER CENT. OF WORKERS EMPLOYED FOR SPECIFIED NUMBER OF MONTHS — | | | | | | | | | | | |
|--------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Machine seaming and finishing, | 10.4 | 34.3 | 47.1 | 50.5 | 53.6 | 58.4 | 62.0 | 67.4 | 73.0 | 70.5 | 86.4 | 100 |
| Knitting, | 8.0 | 38.5 | 50.1 | 54.7 | 60.0 | 64.0 | 69.4 | 72.3 | 77.0 | 83.2 | 90.2 | 100 |
| Looping and transferring, | 4.2 | 38.9 | 49.2 | 53.9 | 58.9 | 60.8 | 66.8 | 71.3 | 74.3 | 80.3 | 87.1 | 100 |
| Winding, | 6.0 | 28.3 | 37.0 | 42.0 | 47.3 | 52.0 | 55.2 | 58.7 | 64.8 | 70.2 | 82.2 | 100 |
| Inspecting, | 1.2 | 32.9 | 42.7 | 45.1 | 60.0 | 52.4 | 57.3 | 61.6 | 68.3 | 70.7 | 79.2 | 100 |
| Wending, | 17.0 | 44.4 | 54.8 | 58.5 | 60.7 | 67.4 | 70.4 | 74.8 | 79.3 | 83.0 | 88.9 | 100 |
| Hand finishing and embroidery, | 7.8 | 31.3 | 38.3 | 43.0 | 46.1 | 52.3 | 56.3 | 59.4 | 64.1 | 74.2 | 86.7 | 100 |
| Folding and boxing, | 4.5 | 42.7 | 48.2 | 51.8 | 54.5 | 60.0 | 71.8 | 75.5 | 79.1 | 82.7 | 89.1 | 100 |
| Cutting, | 2.1 | 46.8 | 60.4 | 60.4 | 62.5 | 62.5 | 70.8 | 72.9 | 83.3 | 87.5 | 91.7 | 100 |
| Pressing, | 5.4 | 24.3 | 35.1 | 37.8 | 43.2 | 48.0 | 51.4 | 56.8 | 73.0 | 81.1 | 83.8 | 100 |
| Boarding, | 10.3 | 20.7 | 31.0 | 31.0 | 31.0 | 34.5 | 41.4 | 51.7 | 88.6 | 72.4 | 86.2 | 100 |
| Taping, | - | 23.1 | 26.9 | 34.6 | 36.5 | 42.3 | 42.3 | 42.3 | 68.4 | 76.9 | 80.8 | 100 |
| Rib-cutting, | - | 37.5 | 54.2 | 62.5 | 62.5 | 66.7 | 66.7 | 66.7 | 70.8 | 70.8 | 75.0 | 100 |
| Miscellaneous, | 13.2 | 38.7 | 46.7 | 48.9 | 52.7 | 57.4 | 60.6 | 63.1 | 68.8 | 74.8 | 84.5 | 100 |
| Occupation not specified, | .3 | 53.2 | 62.6 | 66.7 | 70.7 | 76.4 | 78.8 | 81.5 | 87.5 | 91.2 | 93.6 | 100 |
| Total, | 7.5 | 37.5 | 48.0 | 51.9 | 56.0 | 60.3 | 64.8 | 66.4 | 74.4 | 80.3 | 87.0 | 100 |

TABLE 7. — *Fluctuation of Employment among 3,460 Workers: by Establishments. Hosiery.*

| ESTABLISHMENTS. | PER CENT. OF WORKERS EMPLOYED FOR SPECIFIED NUMBER OF MONTHS. | | | | | | | | | | | |
|-------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| No. 1. | .5 | 37.7 | 43.0 | 45.0 | 48.8 | 50.7 | 55.0 | 56.9 | 65.1 | 71.6 | 80.3 | 100 |
| No. 2. | — | 46.7 | 52.8 | 58.0 | 63.0 | 65.4 | 70.4 | 75.3 | 78.0 | 83.0 | 91.9 | 100 |
| No. 3. | — | 50.0 | 59.1 | 63.6 | 68.2 | 72.7 | 77.3 | 78.9 | 83.4 | 86.7 | 92.0 | 100 |
| No. 4. | — | 25.2 | 46.9 | 53.5 | 59.8 | 65.0 | 70.5 | 73.2 | 76.4 | 84.6 | 91.7 | 100 |
| No. 5. | — | 40.6 | 44.4 | 46.9 | 49.0 | 55.2 | 61.5 | 66.5 | 76.3 | 82.4 | 87.0 | 100 |
| No. 6. | — | 12.1 | 19.2 | 24.2 | 34.3 | 39.4 | 42.4 | 42.4 | 51.5 | 65.7 | 79.8 | 100 |
| Total, | 7.8 | 38.9 | 47.6 | 51.7 | 56.4 | 60.2 | 65.1 | 68.6 | 73.7 | 80.1 | 87.7 | 100 |
| <i>Underwear.</i> | | | | | | | | | | | | |
| No. 7. | .3 | 53.2 | 62.0 | 66.7 | 70.7 | 76.4 | 78.8 | 81.5 | 87.5 | 91.2 | 93.6 | 100 |
| No. 8. | — | 48.9 | 59.7 | 64.2 | 65.3 | 72.2 | 74.4 | 77.3 | 81.8 | 86.4 | 91.5 | 100 |
| No. 9. | — | 28.8 | 38.6 | 44.7 | 41.5 | 43.1 | 51.2 | 55.3 | 64.2 | 69.9 | 95.4 | 100 |
| No. 10. | — | 22.0 | 36.6 | 38.2 | 41.5 | 43.1 | 51.2 | 55.3 | 64.2 | 69.9 | 95.4 | 100 |
| No. 11. | — | 1.0 | 57.7 | 70.2 | 73.1 | 75.0 | 79.8 | 83.7 | 86.4 | 94.2 | 95.2 | 100 |
| No. 12. | — | 14.3 | 51.6 | 59.3 | 61.5 | 63.7 | 69.2 | 74.7 | 82.4 | 89.0 | 94.5 | 100 |
| No. 13. | — | 1.2 | 54.3 | 66.4 | 67.9 | 69.1 | 72.8 | 75.3 | 79.0 | 79.0 | 84.0 | 100 |
| No. 14. | — | 18.5 | 36.9 | 46.2 | 52.3 | 56.9 | 60.0 | 63.1 | 69.2 | 83.1 | 86.2 | 100 |
| No. 15. | — | 25.0 | 55.8 | 61.5 | 71.2 | 75.0 | 76.9 | 76.9 | 80.8 | 88.5 | 90.4 | 100 |
| No. 16. | — | 55.3 | 70.2 | 72.3 | 78.7 | 85.1 | 89.4 | 93.6 | 95.7 | 95.7 | 97.9 | 100 |
| No. 17. | — | 7.7 | 42.3 | 57.7 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 100 |
| Total, | 7.0 | 43.3 | 57.9 | 61.8 | 65.3 | 70.0 | 73.5 | 76.8 | 82.2 | 86.7 | 89.8 | 100 |

DIAGRAM I.

Curve showing Per Cent. of Employment for Women Workers in Hosiery, Underwear and Sweater and Miscellaneous Factories.

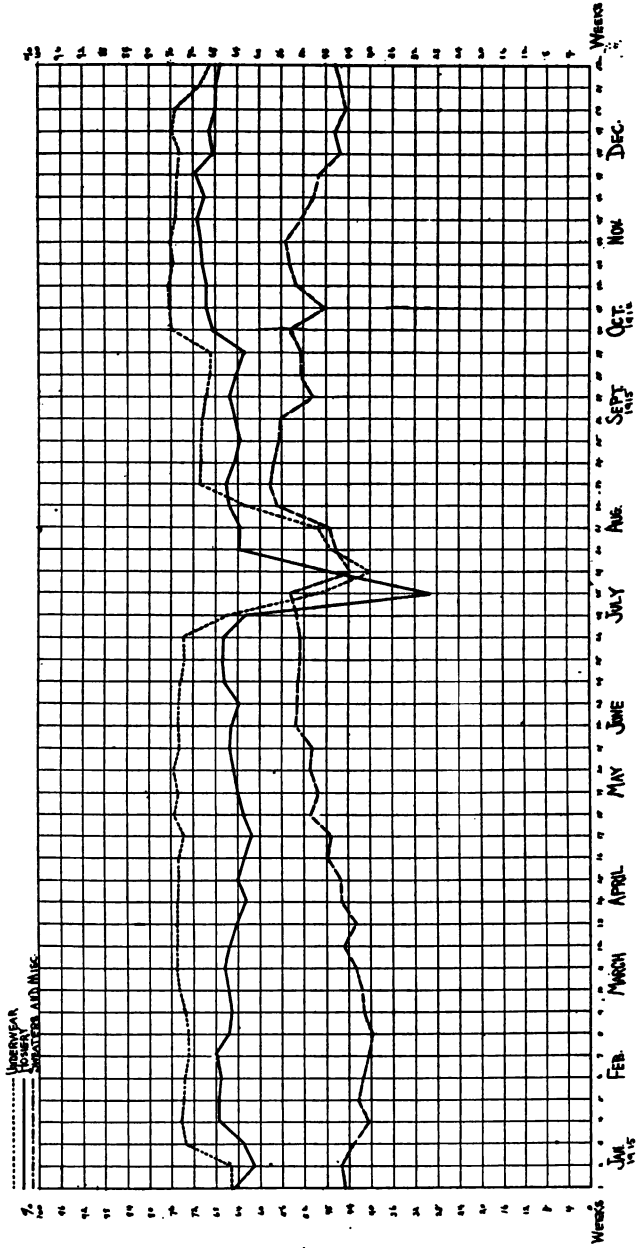


TABLE 8 (a). — *Average Weekly Earnings: by Age Groups.*

| AGE. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|----------------------------|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|--------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| 14 and less than 16, . . . | 13 | 20 | 9 | 8 | — | — | — | — | 50 |
| 16 and less than 18, . . . | 3 | 33 | 49 | 59 | 31 | 21 | 8 | 3 | 207 |
| 18 and less than 21, . . . | 2 | 14 | 37 | 70 | 93 | 88 | 63 | 33 | 400 |
| 21 and less than 25, . . . | 2 | 11 | 41 | 63 | 103 | 79 | 70 | 63 | 432 |
| 25 and less than 30, . . . | 3 | 2 | 13 | 25 | 43 | 51 | 47 | 48 | 232 |
| 30 and less than 35, . . . | — | 2 | 6 | 10 | 25 | 21 | 25 | 30 | 119 |
| 35 and less than 40, . . . | — | — | 3 | 10 | 15 | 21 | 12 | 22 | 83 |
| 40 and less than 45, . . . | 1 | 1 | 4 | 14 | 8 | 14 | 10 | 11 | 63 |
| 45 and less than 50, . . . | — | 3 | 2 | 12 | 9 | 7 | 4 | 8 | 45 |
| 50 and less than 55, . . . | — | — | 4 | 2 | 6 | 7 | 2 | 3 | 24 |
| 55 and less than 60, . . . | — | 2 | 1 | 4 | 5 | 1 | 1 | 1 | 15 |
| 60 and over, . . . | — | 1 | 3 | 1 | 3 | 1 | — | 1 | 10 |
| Total, . . . | 24 | 89 | 172 | 278 | 341 | 311 | 242 | 223 | 1,680 |

NOTE. — Data for age were not available for 1,780 workers.

TABLE 8 (b). — *Average Weekly Earnings: by Age Groups (Cumulative).*

| AGE. | NUMBER OF WORKERS EARNING — | | | | | | | | \$9 and over. |
|----------------------------|-----------------------------|------------|------------|------------|------------|--------------|--------------|------------|---------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | | |
| 14 and less than 16, . . . | 13 | 33 | 42 | 50 | 50 | 50 | 50 | — | |
| 16 and less than 18, . . . | 3 | 36 | 85 | 144 | 175 | 196 | 204 | 3 | |
| 18 and less than 21, . . . | 2 | 16 | 53 | 123 | 216 | 304 | 367 | 33 | |
| 21 and less than 25, . . . | 2 | 13 | 54 | 117 | 220 | 299 | 369 | 63 | |
| 25 and less than 30, . . . | 3 | 5 | 18 | 43 | 86 | 137 | 184 | 48 | |
| 30 and less than 35, . . . | — | 2 | 8 | 18 | 43 | 64 | 89 | 30 | |
| 35 and less than 40, . . . | — | — | 3 | 13 | 28 | 49 | 61 | 22 | |
| 40 and less than 45, . . . | 1 | 2 | 6 | 20 | 28 | 42 | 52 | 11 | |
| 45 and less than 50, . . . | — | 3 | 5 | 17 | 26 | 33 | 37 | 8 | |
| 50 and less than 55, . . . | — | — | 4 | 6 | 12 | 19 | 21 | 3 | |
| 55 and less than 60, . . . | — | 2 | 3 | 7 | 12 | 13 | 14 | 1 | |
| 60 and over, . . . | — | 1 | 4 | 5 | 8 | 9 | 9 | 1 | |
| Total, . . . | 24 | 113 | 285 | 563 | 904 | 1,215 | 1,457 | 223 | |

NOTE. — Data for age were not available for 1,780 workers.

TABLE 9. — *Average Weekly Earnings: by Years of Experience.*

| YEARS OF EXPERIENCE. | NUMBER OF WORKERS EARNING — | | | | | | | | Total. |
|--------------------------------|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|--------------|
| | Under \$3. | \$3 and under \$4. | \$4 and under \$5. | \$5 and under \$6. | \$6 and under \$7. | \$7 and under \$8. | \$8 and under \$9. | \$9 and over. | |
| Less than 1, | 14 | 38 | 40 | 33 | 26 | 16 | 6 | 3 | 176 |
| 1 and less than 2, | 3 | 13 | 18 | 27 | 27 | 15 | 10 | 5 | 118 |
| 2 and less than 3, | 1 | 9 | 18 | 40 | 43 | 38 | 30 | 11 | 190 |
| 3 and less than 4, | 1 | 3 | 19 | 37 | 31 | 42 | 32 | 22 | 187 |
| 4 and less than 5, | 1 | 1 | 6 | 16 | 29 | 36 | 33 | 17 | 139 |
| 5 and less than 6, | - | 1 | 3 | 9 | 17 | 18 | 22 | 19 | 89 |
| 6 and less than 7, | - | 2 | 3 | 7 | 23 | 17 | 11 | 30 | 93 |
| 7 and less than 8, | - | 1 | - | 5 | 11 | 8 | 13 | 19 | 57 |
| 8 and less than 9, | - | - | - | 5 | 12 | 7 | 15 | 14 | 53 |
| 9 and less than 10, | - | 1 | 3 | 2 | 9 | 11 | 5 | 8 | 39 |
| 10 and less than 11, | 1 | - | 1 | 1 | 13 | 11 | 11 | 15 | 53 |
| 11 and less than 12, | - | - | 1 | 5 | 5 | 4 | 7 | 9 | 31 |
| 12 and less than 13, | - | - | - | 4 | 7 | 10 | 9 | 13 | 43 |
| 13 and less than 14, | - | - | - | 1 | 4 | 3 | 5 | 6 | 19 |
| 14 and less than 15, | - | - | 3 | 2 | 4 | 3 | 2 | 7 | 21 |
| 15 and over, | - | 1 | 8 | 14 | 19 | 25 | 17 | 26 | 110 |
| Total, | 21 | 70 | 123 | 208 | 280 | 264 | 223 | 224 | 1,413 |

NOTE. — Data concerning years of experience were not available for 2,042 workers.

TABLE 10. — *Home Conditions and Average Weekly Earnings (Cumulative).*

| HOME CONDITIONS. | NUMBER OF WORKERS EARNING — | | | | | | | |
|----------------------------------|-----------------------------|------------|------------|------------|------------|--------------|--------------|---------------|
| | Under \$3. | Under \$4. | Under \$5. | Under \$6. | Under \$7. | Under \$8. | Under \$9. | \$9 and over. |
| Living at home, | 23 | 111 | 273 | 526 | 836 | 1,126 | 1,343 | 217 |
| Living away from home, | 1 | 2 | 15 | 45 | 87 | 124 | 158 | 26 |
| Total, | 24 | 113 | 288 | 571 | 923 | 1,250 | 1,501 | 243 |

NOTE. — Data concerning home conditions were not available for 1,716 workers.

TABLE 11. — *Home Conditions for 1,876 Employees: by Age Groups.*

| AGE. | NUMBER AND PER CENT. OF WORKERS — | | | | TOTAL. | |
|----------------------------|-----------------------------------|-------------|------------------------|-------------|--------------|------------|
| | LIVING AT HOME. | | LIVING AWAY FROM HOME. | | | |
| | Number. | Per Cent. | Number. | Per Cent. | Number. | Per Cent. |
| 14 and less than 16, . . . | 50 | 100.0 | — | — | 50 | 100 |
| 16 and less than 18, . . . | 202 | 97.6 | 5 | 2.4 | 207 | 100 |
| 18 and less than 21, . . . | 373 | 93.5 | 26 | 6.5 | 399 | 100 |
| 21 and less than 25, . . . | 373 | 86.9 | 56 | 13.1 | 429 | 100 |
| 25 and less than 30, . . . | 200 | 86.2 | 32 | 13.8 | 232 | 100 |
| 30 and less than 35, . . . | 104 | 87.4 | 15 | 12.6 | 119 | 100 |
| 35 and less than 40, . . . | 69 | 83.1 | 14 | 16.9 | 83 | 100 |
| 40 and less than 45, . . . | 52 | 82.5 | 11 | 17.5 | 63 | 100 |
| 45 and less than 50, . . . | 38 | 84.4 | 7 | 15.6 | 45 | 100 |
| 50 and less than 55, . . . | 17 | 70.8 | 7 | 29.2 | 24 | 100 |
| 55 and less than 60, . . . | 13 | 86.7 | 2 | 13.3 | 15 | 100 |
| 60 and over, . . . | 7 | 70.0 | 3 | 30.0 | 10 | 100 |
| Total, . . . | 1,438 | 83.4 | 178 | 10.6 | 1,616 | 100 |

NOTE. — Data for age and home conditions were not available for 1,784 workers.

FINANCIAL STATEMENT.

Appropriations:—

| | | |
|---|------------|-------------|
| Salaries and expenses of the commissioners, . | \$2,000 00 | |
| Salary of the secretary, | 2,000 00 | |
| Clerical assistance, | 3,200 00 | |
| Salaries of investigators, | 4,000 00 | |
| Compensation and expenses of wage boards, . | 2,500 00 | |
| Office rent, | 1,600 00 | |
| Traveling and contingent expenses, . . . | 2,600 00 | |
| | | \$17,900 00 |

Expenditures:—

| | |
|---|------------|
| Salaries and expenses of the commissioners, . | \$1,999 83 |
| Salary of the secretary, | 2,000 00 |
| Clerical assistance, | 3,197 00 |
| Salaries of investigators, | 3,999 16 |
| Compensation and expenses of wage boards, . | 2,499 89 |
| Office rent, | 1,599 96 |

Traveling and contingent expenses:—

| | |
|---|----------|
| Traveling expenses, | \$331 85 |
| Telephone and telegraph, | 188 09 |
| Express and messenger, | 18 96 |
| Stationery and office supplies, | 456 65 |
| Printing, | 1,094 10 |
| Postage, | 286 61 |
| Books, periodicals, clippings, | 108 19 |
| Miscellaneous, | 115 55 |
| | 2,600 00 |

\$17,895 84

Unexpended balance reverting to State treasury:—

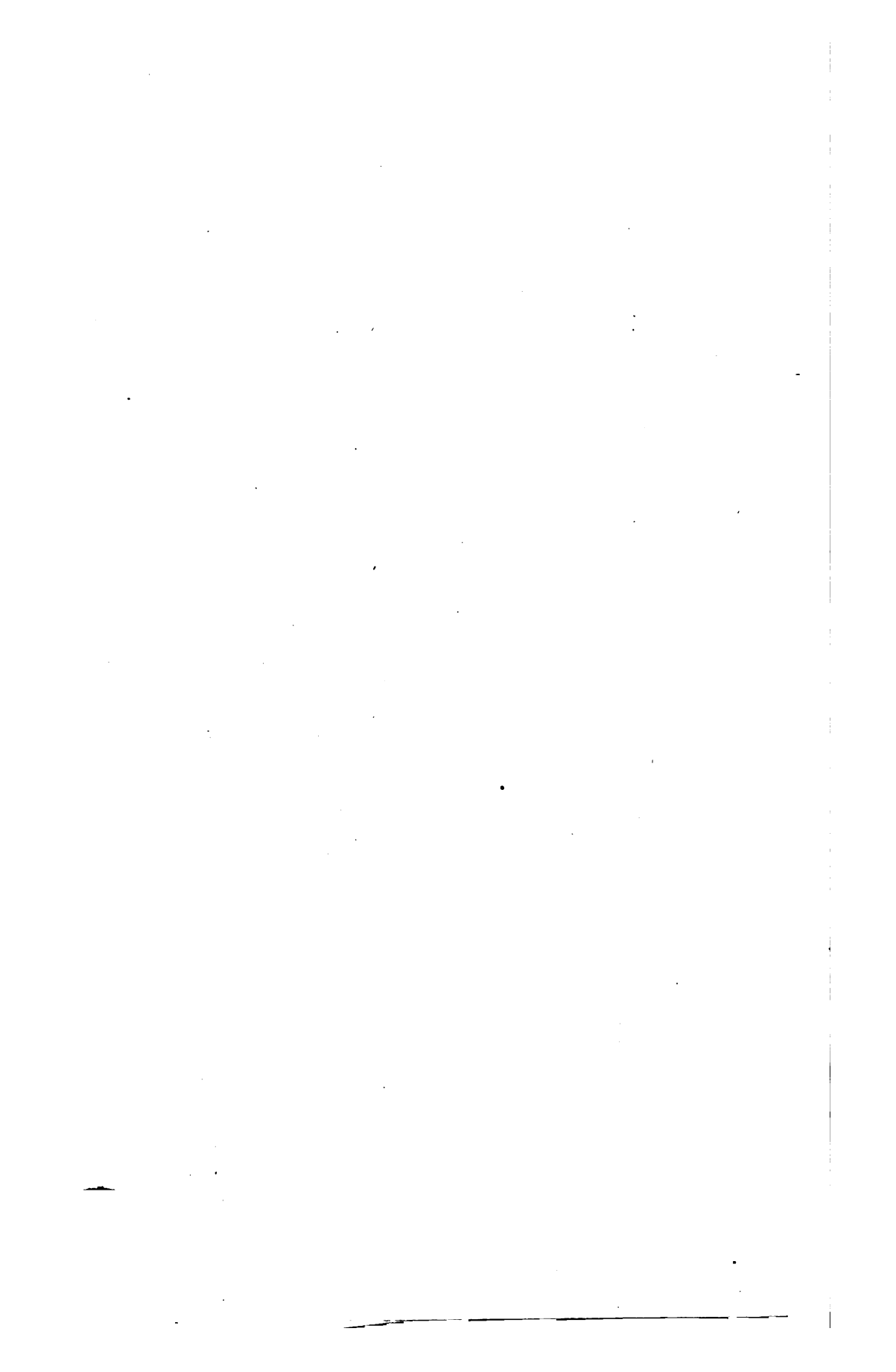
| | |
|---|--------|
| Salaries and expenses of commissioners, | \$0 17 |
| Clerical assistance, | 3 00 |
| Salaries of investigators, | 84 |
| Compensation and expenses of wage boards, | 11 |
| Office rent, | 04 |
| | 4 16 |

\$17,900 00

Yours respectfully,

E. A. Matthews

APPENDICES.



APPENDIX No. 1.

MINIMUM WAGE LEGISLATION OF THE COMMON- WEALTH OF MASSACHUSETTS.

CHAPTER 706, ACTS OF 1912, AS AMENDED BY CHAPTERS 330 AND 673, ACTS OF 1913, AND CHAPTER 368, ACTS OF 1914.

AN ACT TO ESTABLISH THE MINIMUM WAGE COMMISSION AND TO PROVIDE FOR THE DETERMINATION OF MINIMUM WAGES FOR WOMEN AND MINORS.

Be it enacted, etc., as follows:

SECTION 1. There is hereby established a commission to be known as the Minimum Wage Commission. It shall consist of three persons, one of whom may be a woman, to be appointed by the governor, with the advice and consent of the council. One of the commissioners shall be designated by the governor as chairman. The first appointments shall be made within ninety days after the passage of this act, one for a term ending October first, nineteen hundred and thirteen, one for a term ending October first, nineteen hundred and fourteen, and one for a term ending October first, nineteen hundred and fifteen; and beginning with the year nineteen hundred and thirteen, one member shall be appointed annually for the term of three years from the first day of October and until his successor is qualified. Any vacancy that may occur shall be filled in like manner for the unexpired part of the term.

SECTION 2. Each commissioner shall be paid ten dollars for each day's service, in addition to the traveling and other expenses incurred in the performance of his official duties. The commission may appoint a secretary, who shall be the executive officer of the board and to whose appointment the rules of the civil service commission shall not apply. It shall determine his salary, subject to the approval of the governor and council. The commission may incur other necessary expenses not exceeding the annual appropriation therefor, and shall be provided with an office in the state house or in some other suitable building in the city of Boston.

SECTION 3. It shall be the duty of the commission to inquire into the wages paid to the female employees in any occupation in the commonwealth, if the commission has reason to believe that the wages paid to a substantial number of such employees are inadequate to

supply the necessary cost of living and to maintain the worker in health.

SECTION 4. If after such investigation the commission is of the opinion that in the occupation in question the wages paid to a substantial number of female employees are inadequate to supply the necessary cost of living and to maintain the worker in health, the commission shall establish a wage board consisting of an equal number of representatives of employers in the occupation in question, and of persons to represent the female employees in said occupation, and of one or more disinterested persons appointed by the commission to represent the public; but the representatives of the public shall not exceed one-half of the number of representatives of either of the other parties. The commission shall give notice to employers and employees in said occupation by publication or otherwise of its determination to establish a wage board and shall request that said employers and employees, respectively, nominate representatives for said board by furnishing names to the commission. The representatives of employers and employees shall be selected by the commission from names furnished by the employers and by the employees, respectively, provided that these names are furnished within ten days after the request of the commission. The commission shall designate as chairman one of the representatives of the public, and shall make rules and regulations governing the selection of members and the modes of procedure of the boards, and shall exercise exclusive jurisdiction over all questions arising with reference to the validity of the procedure and of the determination of the boards. The members of wage boards shall be compensated at the same rate as jurors, and they shall be allowed the necessary traveling and clerical expenses incurred in the performance of their duties, these payments to be made from the appropriation for the expenses of the commission.

SECTION 5. The commission may transmit to each wage board all pertinent information in its possession relative to the wages paid in the occupation in question. Each wage board shall take into consideration the needs of the employees, the financial condition of the occupation and the probable effect thereon of any increase in the minimum wages paid, and shall endeavor to determine the minimum wage, whether by time rate or piece rate, suitable for a female employee of ordinary ability in the occupation in question, or for any or all of the branches thereof, and also suitable minimum wages for learners and apprentices and for minors below the age of eighteen years. When a majority of the members of a wage board shall agree upon minimum wage determinations, they shall report such determinations to the commission, together with the reasons therefor and the facts relating thereto.

SECTION 6. Upon receipt of a report from a wage board, the commission shall review the same, and may approve any or all of the determinations recommended, or may disapprove any or all of them, or may

recommit the subject to the same or to a new wage board. If the commission approves any or all of the determinations of the wage board it shall, after not less than fourteen days' notice to employers paying a wage less than the minimum wage approved, give a public hearing to such employers, and if, after such public hearing, the commission finally approves the determination, it shall enter a decree of its findings and note thereon the names of employers, so far as they may be known to the commission, who fail or refuse to accept such minimum wage and to agree to abide by it. The commission shall thereafter publish at such times and in such manner as it may deem advisable a summary of its findings and of its recommendations. It shall also at such times and in such manner as it shall deem advisable publish the facts, as it may find them to be, as to the acceptance of its recommendations by the employers engaged in the industry to which any of its recommendations relate, and may publish the names of employers whom it finds to be following or refusing to follow such recommendations. An employer who files a declaration under oath in the supreme judicial court or the superior court to the effect that compliance with the recommendation of the commission would render it impossible for him to conduct his business at a reasonable profit shall be entitled to a review of said recommendation by the court under the rules of equity procedure. The burden of proving the averments of said declaration shall be upon the complainant. If, after such review, the court shall find the averments of the declaration to be sustained, it may issue an order restraining the commission from publishing the name of the complainant as one who refuses to comply with the recommendations of the commission. But such review, or any order issued by the court thereupon, shall not be an adjudication affecting the commission as to any employer other than the complainant, and shall in no way affect the right of the commission to publish the names of those employers who do comply with its recommendations. The type in which the employers' names shall be printed shall not be smaller than that in which the news matter of the paper is printed. The publication shall be attested by the signature of at least a majority of the commission.

SECTION 7. Repealed.

SECTION 8. Whenever a minimum wage rate has been established in any occupation, the commission may, upon petition of either employers or employees, reconvene the wage board or establish a new wage board, and any recommendation made by such board shall be dealt with in the same manner as the original recommendation of a wage board.

SECTION 9. For any occupation in which a minimum time rate only has been established, the commission may issue to any woman physically defective a special license authorizing the employment of the licensee for a wage less than the legal minimum wage: *provided*, that it is not less than the special minimum wage fixed for that person.

SECTION 10. The commission may at any time inquire into the wages paid to minors in any occupation in which the majority of employees are minors, and may, after giving public hearings, determine minimum wages suitable for such minors. When the commission has made such a determination, it may proceed in the same manner as if the determination had been recommended to the commission by a wage board.

SECTION 11. Every employer of women and minors shall keep a register of the names, addresses and occupations of all women and minors employed by him, together with a record of the amount paid each week to each woman and minor, and shall, on request of the commission or of the director of the bureau of statistics, permit the commission or any of its members or agents, or the director of the bureau of statistics or any duly accredited agent of said bureau, to inspect the said register and to examine such parts of the books and records of employers as relate to the wages paid to women and minors. The commission shall also have power to subpoena witnesses, administer oaths and take testimony. Such witnesses shall be summoned in the same manner and be paid from the treasury of the commonwealth the same fees as witnesses before the superior court.

SECTION 12. Upon request of the commission, the director of the bureau of statistics shall cause such statistics and other data to be gathered as the commission may require, and the cost thereof shall be paid out of the appropriation made for the expenses of the commission.

SECTION 13. Any employer who discharges or in any other manner discriminates against any employee because such employee has testified, or is about to testify, or has served or is about to serve upon a wage board, or is or has been active in the formation thereof, or has given or is about to give information concerning the conditions of such employee's employment, or because the employer believes that the employee may testify, or may serve upon a wage board, or may give information concerning the conditions of the employee's employment, in any investigation or proceeding relative to the enforcement of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than two hundred dollars and not more than one thousand dollars for each offence.

SECTION 14. The commission shall from time to time determine whether employers in each occupation investigated are obeying its decrees, and shall publish in the manner provided in section six, the name of any employer whom it finds to be violating any such decree.

SECTION 15. Any newspaper refusing or neglecting to publish the findings, decrees or notices of the commission at its regular rates for the space taken shall, upon conviction thereof, be punished by a fine of not less than one hundred dollars for each offence.

SECTION 16. No member of the commission and no newspaper pub-

lisher, proprietor, editor or employee thereof, shall be liable to an action for damages for publishing the name of any employer in accordance with the provisions of this act, unless such publication contains some wilful misrepresentation.

SECTION 17. The commission shall, annually, on or before the first Wednesday in January, make a report to the general court of its investigations and proceedings during the preceding year.

SECTION 18. This act shall take effect on the first day of July in the year nineteen hundred and thirteen. [*Approved June 4, 1912.*]

CHAPTER 65, GENERAL ACTS OF 1915.

AN ACT TO PROVIDE FOR THE POSTING OF INFORMATION IN PLACES OF
EMPLOYMENT.

Be it enacted, etc., as follows:

SECTION 1. The minimum wage commission may require employers to post in conspicuous positions in their places of employment such notices as the said commission may issue for the information of employees.

SECTION 2. This act shall take effect upon its passage. [*Approved March 12, 1915.*]

APPENDIX No. 2.

MINIMUM WAGE DECREES IN FORCE JAN. 1, 1916.

BRUSH DECREE.

The Minimum Wage Commission of the Commonwealth of Massachusetts, having before it the report of the Brush Makers' Wage Board, after public hearing thereupon held June 29, 1914, and for the reasons set forth in its opinion of even date, in accordance with St. 1912, c. 706, par. 6, makes the following decree: —

1. The lowest time wage paid to any experienced female employee in the brush industry shall be 15½ cents an hour.
2. The rate for learners and apprentices shall be 65 per cent. of the minimum, and the period of apprenticeship shall not be more than one year.
3. These findings shall apply also to all minors.
4. If in any case a piece rate yields less than the minimum time rate, persons employed under such rate shall be paid at least 15½ cents an hour.
5. This decree shall take effect on Aug. 15, 1914, and shall remain in effect until altered by the Commission.

By the order of

MINIMUM WAGE COMMISSION
OF THE COMMONWEALTH OF MASSACHUSETTS.

H. LARUE BROWN, *Chairman.*
MABEL GILLESPIE.
ARTHUR N. HOLCOMBE.

Attest:

AMY HEWES,
Secretary.

AUG. 3, 1914.

UNIVERSITY OF MICHIGAN



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